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ABSTRACT

Computer-assisted instruction can be valuable in the teaching and learning of skills associated with the reading and interpretation of maps. The purpose of this manual is to provide teachers with a resource guide for the development of students' map skills and understanding of world geography through the use of a computer. Several suggested procedures for creating and managing a computer laboratory are outlined including ideas for using the equipment before and during the computer lab period. Lesson plans for 67 topics are presented, classified by six sections: (1) "Introduction"; (2) "Map Skills"; (3) "Geography"; (4) "Geography of Africa"; (5) "Geography of Asia"; and (6) "Geography of South America." Appendices include information on computer software and diskette use, and addresses and telephone numbers for additional information. (AS)

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DEVELOPING MAP SKILLS

USING COMPUTERS

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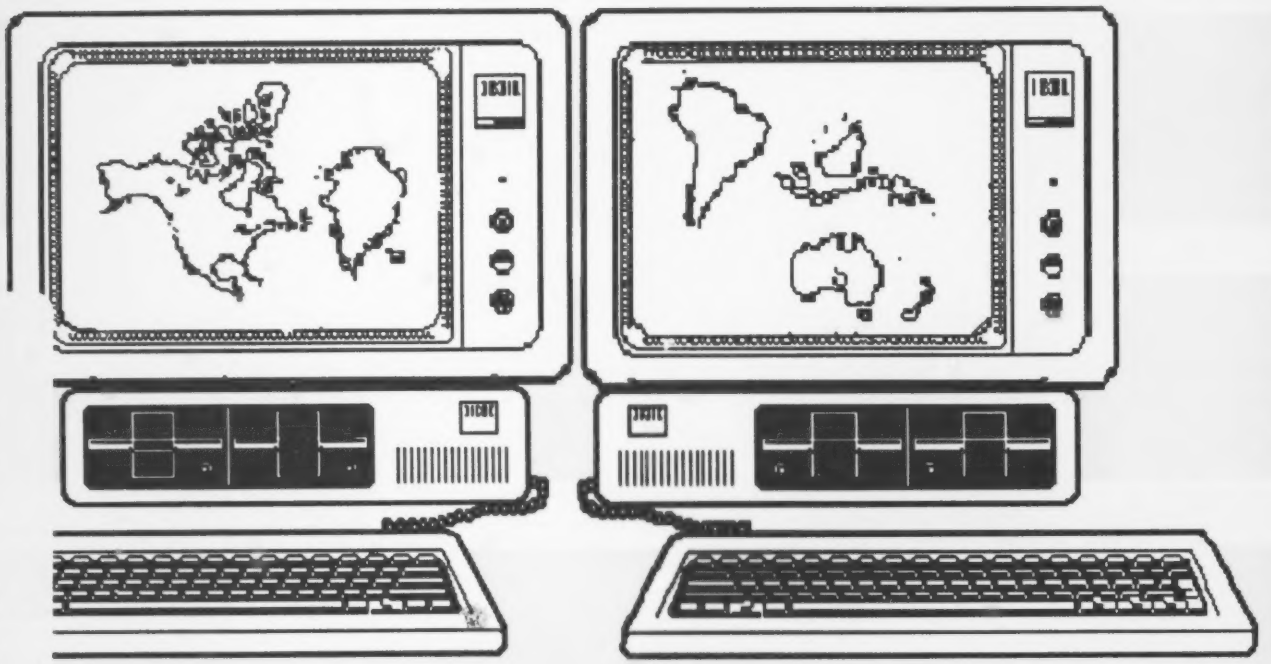

NEW YORK CITY BOARD OF EDUCATION

DIVISION OF COMPUTER INFORMATION SERVICES

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DEVELOPING MAP SKILLS USING COMPUTERS

NEW YORK CITY BOARD OF EDUCATION

DIVISION OF COMPUTER INFORMATION SERVICES

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Foreword

The rapid establishment of the computer as a routine instrument of instruction and its successful integration within curricula inspires educators to continue to explore its potential and expand its applications.

The purpose of this guide is to offer teachers and supervisors a working knowledge of current approaches to the direct application of the computer to the classroom, from which we can count on them to constantly devise new ideas for its use. Since computer-centered instruction rests upon a dynamic, evolving technology, only flexible and contemporary methods and materials will lead to fulfillment of its possibilities for the benefit of our children. We encourage our colleagues to experiment freely from the base of this guide's lesson plans and suggestions, and to work in concert with us to assure the computer's continued use as an efficient classroom tool.

I invite you to write to me directly with any comments or suggestions.

Irwin Kaufman, Chief Information Officer
New York City Board of Education

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Developing Map Skills Using Computers is a joint project of the Division of Computer Information Services, Irwin Kaufman, Chief Information Officer, and the Office of the Chancellor, Dolores Fernandez, Deputy Chancellor for Instruction and Development.

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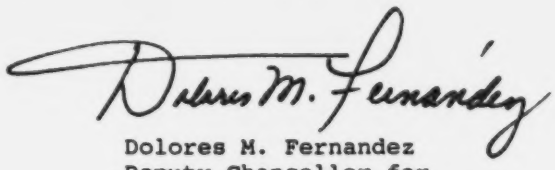
Introduction

Developing Map Skills Using Computers is a joint project of the Office of the Deputy Chancellor for Instruction and Development and the Division of Computer Information Services. The use of computer-assisted instruction has proved to be a valuable enhancement to the process of effective teaching and learning. Especially in the acquisition of skills associated with the reading and interpretation of maps, the necessary systematic, graphic, and varied teaching methodologies in both group and individualized settings are augmented by computer-assisted instruction.

In this critical time in education, we have a responsibility to use every available resource and to address individual learning styles to enhance maximum achievement. It is our hope that this manual will guide social studies teachers in the judicious application of the power of the computer in their classrooms to the maximum benefit for their students.



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Notes On The Use Of This Guide

The purpose of this manual is to provide teachers with a resource guide for the development of students' map skills and understanding of world geography through the computer.

Each of the topics represents an approach to the use of computers as an enhancement to regular instruction of Social Studies. It is expected that teachers will "pick and choose" from among various methods and approaches which are offered. In that sense, the book is a "sampler" of possible teaching techniques.

This collection of suggested lessons is not intended as a sequential course, but rather as a reference and guide from which teachers may draw to the extent and in the manner they deem appropriate for their students. Each lesson indicates the features of the software and represents a sharing of ideas on its applications by teachers who have already had successful experiences with computer-aided instruction. A listing of software used in the lessons can be found on page 234. Those who require more information or assistance in implementing the software are referred to their local Technical Assistance Center. (See "For More Help...")

It is expected that as teachers gain in experience with the computer as a teaching tool and in familiarity with the software content and flexibility of its use, they will not only utilize the plans increasingly, but will also devise many new strategies for future dvelopment of these materials.

Preface: Computers - Teaching Tool

Computers were obviously not in mind when antislavery preacher Henry Ward Beecher offered this defense of technology over a hundred years ago:

> "A tool is but an extension of a man's hand, and
> a machine is but a complex tool..."

We may nevertheless find in it encouragement in considering their applicability to teaching and learning. Teachers already seasoned in computer-based instruction understand its power in raising instructional effectiveness, and are free of unwarranted concern about bypassing human reason and the loss of affective considerations. Others, at the threshold of engaging this seemingly robotic methodology, may confidently expect that even these complex machines are simply extended tools of instruction. They are fully controlled by the instructor's hands as readily as the conventional ones - chalk, textbooks and the like.

Teachers may anticipate at least the following advantages to incorporating the computer into their regular instructional program:

- students may study individually, and yet together, on synchronized exercises
- each student is required to focus attention narrowly; the graphic, repeatable presentations and explanations may ensure a clearer understanding of the lesson's topic
- it allows a greater immediacy of active, individual response for a greater number of students
- it gives students immediate feedback to their responses
- students may work at their own pace rather than at the pace of an imaginary class median
- it makes possible a more extended contact with the subject matter, as an individual or as part of a small group
- it affords absentees a certain and convenient way to catch up on missed studies
- it opens up to teachers strategies to make more efficient use of class time than some traditional question-and-answer lessons
- students' responses are treated in a nonjudgemental way, which may make learning more comfortable for some students; it never gets tired of a demand for countless repetitions of the same instruction
- it may free the teacher of not just routine instructional tasks but also tiresome chores of keeping records of student needs and progress
- an additional varied approach to presentation and drill is made available

. it holds an intrinsic motivational quality that may increase student interest, concentration and retention

Experienced teachers will quickly recognize that these established advantages are thoroughly consistent with sound teaching practices and, skillfully applied, provide considerable support for their efforts to provide students with optimally effective and interesting instruction.

We are confident that the enclosed software will make teaching and learning a little more rewarding and enjoyable for you and your students.

Classroom Management Procedures

A full class load of students working independently at 16 or more computer stations can easily lead to an almost chaotic confusion during a computer lab period, particularly if finding and distributing each student's working diskette takes excessive time at the start. In addition, one's ability to retrieve the performance information the program will record for each student depends upon carefully organizing the distribution and collection of the diskettes from the start. For these reasons, and a host of others, it is a good idea to think of classroom management procedures long before the computer lab period actually takes place, and to structure both the computer period and the computer room in ways that will make the period run smoothly and effectively.

In an ideal world each of the students would be able to work independently at a computer workstation, and that situation may exist in some classrooms at some times during the year. But most classes consist of 30 or more students and most computer labs of 16 or fewer workstations; the large number of workstations and the larger number of students require careful record keeping and classroom management. Students must work in a highly structured environment in the lab or they will accomplish much less than one expects them to.

The following outline of suggested procedures will help you create a structured computer lab; after a few periods in the lab you may want to modify the procedures to better suit your own needs.

I. Before the computer lab period.

1. If you are not familiar with the computers in your school, or not entirely comfortable with them, spend some time working with them on your own before you guide your students in using them. Your uncertainty or uneasiness about computers may leave you at a loss at some point in your lesson or be transmitted to those of your students who also feel intimidated by the machine. In either case it will have a negative effect on your lesson.

2. Preview thoroughly the software you intend to use. Learn what it does and how it works. Find out what background information your students will need to run the program --for example, what vocabulary they will have to know. Once 16 groups of students start working and, presumably, asking questions, it will be impossible to decipher anything about the program that you, and they, may find confusing.

3. Number each workstation in the computer lab clearly, so that you and the students can refer to the numbers easily.

   If it isn't possible to copy one student working diskette for each member of the class, you can use one diskette at each workstation. However, the advantages of individual student diskettes outweigh the disadvantages, and by a wide margin. Diskettes are relatively inexpensive, particularly when they are ordered in large quantities, and you will be able to use them year after year, virtually forever, simply by recopying the original program diskette over them whenever a class completes the program. In addition, providing each student with an individual diskette will prevent certain student generated errors from occurring and make classroom management and student evaluation much easier for you. Refer to the section of this booklet entitled "Software Duplication Guidelines" for copying instructions and for information about obtaining diskettes through a Bureau of Supplies contract.

4. Clearly label each diskette to coincide with one of the workstations--i.e., diskette number 14 must always be used at workstation 14. (Of course, any diskette will work at any station, but for classroom management purposes make sure the students follow this rule strictly.)

5. Divide your class into workstation groups of two, three, or four students, as needed. Look over the student combinations carefully before making final assignments. If you don't feel that a particular combination of students will work well together for an extended period of time, don't allow them to form a group. Once a group has been established, it will be necessary for those students to work together through each of the modules in the program, a procedure that can last for weeks.

6. Assign each group a work station number and keep a close record of the names of the group members and their group number. Each group should work at the same workstation through the entire program, and with the same student operating diskette. Each student operating diskette will eventually hold all of the records of only those students who use that diskette. If a student uses a different diskette each time he works, the records will be scattered among them all, and it will be difficult to retrieve them; for 30 or more students it would be too time consuming to be feasible.

7. As an extra precaution, label each diskette with the names of the students who will use it.

8. Make sure each terminal has a duplicated instruction sheet for saving. Losing work because of a quick, careless save can be very upsetting.

II. During the computer lab period.

1. At the beginning of the period have the students sit at their assigned workstations, with no exceptions. Then distribute the diskettes according to their corresponding numbers; the student names on the diskettes should also correspond to the students who are at each workstation.

2. At the end of the period collect the diskettes and store them in numerical order to make their distribution at the next period easier.

3. Once you have established workstation groups, assignments and procedures, resist any temptation to make changes unless the changes will clearly be to your advantage. As in any classroom, the closer you follow established procedures, the more control you will maintain over the period and the more effective the use of the software will be.

4. Have a signal, or stop the class and tell them to close down the terminals prior to the bell. Insist that they respond to your request.

5. Allow ample time to do printing. It usually takes longer than anticipated. A computer paraprofessional or student printer assistant can speed up the process.

6. The students should be responsible for turning off the computers and printers. They should also place their chairs in the proper position. Insist that they follow the procedures you establish.

Table of Contents

Foreword iii
Acknowledgments iv
Introduction v
Notes on the Use of This Guide vi
Preface vii
Classroom Management Procedures ix

Introduction 1
1. The Vocabulary of Geography 3
2. Reviewing Geography Terms; Use of Reference 6
3. Reviewing Geography Terms; Dictionary 8

Map Skills 11
4. Primary and Intermediate Directions 13
5. Street Map 16
6. Scale (Middle Elementary) 18
7. Primary Map Directions 20
8. Directions and Distance 22
9. Map of a Neighborhood 27
10. Uses of Map Colors 30
11. Map Symbols 33
12. Comparing Flat Maps and Globes: Direction; Symbols 36
13. Finding Places on Maps 40
14. Latitude and Longitude (Finding Buried Treasure 44
15. Measuring Distance on Maps 48
16. What Globes Tell Us About the Earth 53
17. Land Forms and Bodies of Water 57
18. Land Forms 61
19. Lesser Land Areas and Water Bodies 63
20. The Continents and Oceans of the World 67
21. Terrain 69
22. Ocean Floor Mapping 71
23. Physical Maps 73
24. Topographical Maps 75
25. Climate 79
26. Weather Maps 81
27. Population Maps 83
28. Compass Headings; Calculating Distances on Water 85
29. Locating Places on Water: Triangulation 90

Geography 95
30. Geography of Europe 97
31. London (A Mystery Game) 100
32. U.S. States and Capitals (A Mystery Exploration Game) 103
33. Countries of the World (A Mystery Exploration Game) 108
34. European Cities and Countries 116
35. Paris 118

Geography of Africa 121
36. Introduction to African Geography I 123
37. Introduction to African Geography II 127
38. Introduction to African Geography III 131
39. Sub-Saharan Africa: The North 133
40. Sub-Saharan Africa: The South 137
41. The Varied African Landscape 142
42. Effects of Geography and Resources on the Cultures and Economy of South Africa 145

Geography of Asia 149
43. Land Usage in Asia 151
44. Asia: Data Base Information 154
45. Land and Water Forms (Asia) 156
46. Southeast Asian Geography and Economy 159
47. Locating Japan on the World Map 161
48. Japan: Using Latitude 163
49. Topography of Japan 166
50. The Geography of Japan: Historical Isolation 168
51. Geography of Japan: Review of Scale of Distance and Map Legends 170
52. Reviewing the Geography of Japan 173
53. Map Study of China: Population, Cities, Topography and Ethnic Groups 175
54. Geography of China 177
55. Map Directions: Locating Chinese Cities 180
56. China: Map Legends 183
57. India: Using Latitude and Longitude 186
58. India: Measuring Distances on a Map 189
59. Locating the Middle East 192
60. Middle East Overview 194
61. The Topography of the Middle East 196
62. The Influence of Geography on the Culture of the Middle East 198
63. Ancient Middle Eastern History Through Map Study 200
64. People of the Middle East 204
65. Middle East: Controversial Areas and Issues 209

Geography of South America 217
66. North and South America: Geographical Data 219
67. Effects of Geography and Resources on Argentina's Economy 222

Appendices 225
Software Duplication Guidelines 227
Copying Public Domain Diskettes for MS DOS 228
Copying Public Domain Diskettes for Apple II 230
Caring for Your Diskettes 232
For More Help 233
Software Used in This Guide 234

INTRODUCTION

Topic 1: The Vocabulary of Geography

Aim: How can we make our geography vocabulary grow?

Performance Objectives: Students will be able to:

- develop one technique for studying social studies vocabulary
- transfer that technique to another school subject
- define and spell the following concepts:
  - crater
  - elevation
  - fjord
  - current
  - estuary
  - perma-frost

Materials:

- Apple IIe computer lab
- software: Matchmaker World Geography Facts, by American Education Computer, Inc.
- Topographical map of the United States
- pictures of a volcano and a fjord
- glass of water and a pan

Motivation:

Place the following on the chalkboard: "Hint: one of the 50 states."

__ __ __ __ __ __

Have students take turns guessing letters to fill in the blanks. Acknowledge that ALASKA is the correct answer. "How do you spell ALASKA? What game show does this remind you of?"

Development:

1. Write these words on the chalkboard: CRATER, CURRENT, ELEVATION, ESTUARY, FJORD, FLOOD PLAIN, PERMA-FROST.

2. These words are important in studying the geography of a country. Some words you probably remember from previous grades; some you forgot. Why do you think you forgot them? We are going to be using these words to describe countries. How can we remember what they mean?

3. Could I remember your telephone number if you did not tell me what it was? The first step in remembering is really knowing what it means. If a friend told you his or her phone number would you write it down? So, after we really understand what the word means we should write it down.

4. Hold up the picture of a volcano. "What is this? It is a volcano. How is a volcano different from a regular mountain? Where does the lava come out? The hole in the top of a volcano is called a crater. On your paper write the word CRATER, and what you think the word means." Have students read their definitions. Have students come to an agreement on a good definition.

5. Hold up a glass of water. Is the water in the glass moving? Slowly pour the water into the pan. "Is the water moving now? In what direction is it moving? Does the water in a river move? The water flowed from the glass to the pan. It flowed down. Can water flow up from the pan to the glass? Rivers flow down to the sea. Rivers have currents. They flow. Do swimming pools have currents? Current is the flow of water from one place to another." Have students write the word CURRENT and its

definition, using their own words.

6. Hold up the picture of a fjord. Use their textbooks if they include a picture of a fjord. What is so impressive about this picture? It is surrounded by high cliffs. This is a picture of a fjord. A fjord is a body of water. What is so special about a fjord? A fjord is a body of water surrounded by high cliffs. Have students write the word FJORD and a definition for fjord, using their own words.

7. Point to the topographical map. Have students point out an area of mountains on the map. "Is this area high or low? If I traveled from the ocean to the top of the mountain, would I travel up or down? The ocean is at sea level. Is the mountain above or below sea level? Which is higher above sea level: the top of a mountain or the beach? The mountain is higher above the level of the sea. A mountain that is 10,000 feet high is 10,000 feet above sea level. 10,000 feet is the mountain's elevation. Elevation is the distance above sea level." Have students write the word ELEVATION and a definition for elevation, using their own words.

8. We said that a river flows down to the sea. The part of the river that meets the sea is called an estuary. If I tasted the water in the ocean, would it taste the same as regular water? Why not? The ocean is salt water. Does a river have salt water? What would the water in the estuary, the water where the sea and the river come together, be like: salty or not salty, or a mixture of both? An estuary is the part of the river that meets the sea. Have students write the word ESTUARY and a definition of estuary, using their own wording.

9. "On a very cold day in the winter is the ground hard or soft? Why is it hard? As the spring comes and it gets warmer, does the ground stay hard? Why not? If I had a big block of ice and a little ice cube, which would melt first? When it's cold for a short time, the top of a puddle might freeze, but if it is very cold for a very long time, what happens to the puddle? The same is true for the ground. When it's cold for a long while, the ground is frozen so deep that only the top layers melt in the spring and summer. Underground, the dirt is still frozen. This is perma-frost. Perma-frost is ground whose surface melts and becomes soft in the summer but deep down it stays frozen all year long." Have students write the word PERMA-FROST and a definition for perma-frost, using their own words.

10. "Now that we have our vocabulary words and their definitions, we need a way of remembering them. If you gave me your phone number and I wrote it down, do you think I could dial your number without looking at the paper? Why not? Are there any telephone numbers that you know by heart? Why do you remember them so well? We remember things by using them over and over. A fun way of using words over and over is to play games with them. We are going to play hangman on the computer using our new vocabulary words."

11. Tell students to insert disk into drive "A". The students should turn on the monitors and computer power. The program is self-loading.

12. When the menu appears on the screen, instruct the students to select game 1.

13. The computer-directed instructions consists of a hangman-type game using the vocabulary words. The game will replay until a student gets 70 percent correct.

14. Allow the students a reasonable time to complete the activity.
    Suggested time: 10 minutes.

Summary:

1. What do we call a body of water surrounded by high cliffs?
2. Wnen underground soil remains frozen all year long, what is it called?
3. What is the hole in the top of a volcano called?
4. What is the movement of water called?
5. What do we call the place where a river meets the sea?
6. What do we call the distance above or below sea level?

Homework:

1. Using index cards or small pieces of paper, make flash cards with vocabulary words on one side and the definitions on the other.

2. Draw a picture of a volcano. Label the crater.

3. Draw a map of a make-believe country. Draw in rivers. Label the estuaries and use an arrow to point out the direction of the current.

4. Use your textbook to list four countries where you would expect to find perma-frost.

5. Use your textbook to list five different mountains and their elevations.

Enrichment:

1. Using your dictionary, find meanings other than those given in this lesson for these words:

   elevation current crater

2. Draw a simple pencil sketch illustrating a fjord, estuary.

3. Draw a cross-section of the earth's crust showing the perma-frost.

Topic 2: Reviewing Geography Terms: Use of Reference

Aim: In what reference source can we find more complete explanations for geography terms we do not know?

Performance Objectives: Students will be able to:

- explain the similarities of and differences between a dictionary and an encyclopedia
- cite two reference sources for geography terms
- define continents, gulfs, deltas, deserts, watersheds, mainlands, highlands, isthmuses mountains and oceans

Materials:

- Apple IIe computer lab
- software: Matchmaker World Geography Facts, by American Educational Computer, Inc.
- map of the world
- I and W volumes of an encyclopedia
- class set of dictionaries

Motivation:

The computer-directed activity is the motivation.

1. Students should insert disk into drive "A," and turn on the monitors and computer power. The program is self-loading. It tests studenst on certain geographical terms.

2. When the menu appears on the screen, instruct the students to select game 3. Instruct students to stop after completing the activity.

3. Have studenst repeat the activity writing down their wrong answers, and correcting them.

4. Allow the students a reasonable amount of time to complete the activity twice. The suggested time is 15 minutes.

Development:

1. "What are some of the terms you got wrong?" List on the board. Most students will list isthmus, delta and watershed.

2. These are new terms. "Where might you look to find the meaning of DELTA?" Have students locate DELTA in the dictionary. Ask a student to read the first definition aloud. The 4th letter of the Greek alphabet. "Does that have anything to do with geography? Is it a clear definition; do you understand what it means?"

3. If students' text book has a glossary, have them look up the word DELTA. Is that a clear definition. It should be. If the definition is not clear, explain how a delta is formed. Have students write the word DELTA and a definition, using their own words.

4. Write the word ISTHMUS on the board. Have students locate the word ISTHMUS in the dictionary. Ask a student to read the definition aloud. "Is that a clear definition? If not, let us rephrase it to simplify it." Ask the students to point to an isthmus on the map.

5. Introduce the advantages of encyclopedias. Read the encyclopedia's entry for isthmus. If possible, distribute photocopies of the entry. "Which tells us more about isthmuses: the dictionary or the encyclopedia? What does the encyclopedia tell us that the dictionary does not tell us?"

6. Write the word WATERSHED on the board. Have students locate the word WATERSHED in the dictionary. Ask a student to read the definition out loud. Then read aloud the entry for watershed in the encyclopedia. "Does this explain the word better? What are some of the things the encyclopedia tells us about the watersheds?" List. Have students write the word WATERSHED and its definition, using their own words.

Summary:

1. What books did we use to find the meanings of the new terms?
2. Which book gave us the most information?
3. What do we call the narrow piece of land that connects two bigger pieces of land?
4. What is a watershed?
5. If time allows, have students do computer-directed activity again.

Homework:

1. Draw a map of a make-believe region of the world showing an isthmus. Label the isthmus.

2. Draw a map of a make-believe country. Draw a line to show a watershed. Draw rivers going in both directions from the watershed to the sea. Use arrows to show what direction the rivers are flowing.

Enrichment:

1. Create a watershed using paper mache.

2. Use an encyclopedia to list all the information you can find on the geography of the country of Panama.

3. Draw a map of Panama. The Panama Canal is a man-made body of water connecting the Atlantic and Pacific Oceans. Why did they put the canal in Panama? Use the word isthmus in your answer.

Topic 3: Reviewing Geography Terms: Dictionary

Aim: How can we understand and remember certain geographic terms more easily?

Performance Objectives: Students will be able to:

- locate the definitions of geography terms in the dictionary
- restate the definitions of geography terms in the simplest form
- define the prefix "sub"
- identify: pampas, steppes, sub-continent, savanna, equator

Materials:

- Apple IIe computer lab
- software: Matchmaker World Geography Facts, by American Educational Computer Inc.
- dictionary for each student
- world map

Motivation:

Place the following on the chalkboard:

- the transmission and reception of images of moving or stationary objects with accompanying sound by electronic means.
- the receiving apparatus used in this process

Can anyone tell us what word this defines? Acknowledge that the word is television. Is this an easy definition to understand? How could we define television more simply? Write class' simple definition on chalkboard. Which definition would be easier to remember. Pass out the dictionaries.

Development:

1. Write the word SAVANNA on the board. Have students look up the meaning in the dictionary. Have a student read definition out loud. What words describe savanna? List: Flat, treeless, grassland, sub-tropical or tropical regions. What does treeless mean? What is a grassland? What kind of place is tropical? Have students write the word SAVANNA and its definition, using their own words.

2. Write the word PAMPAS on the board. Have students locate PAMPAS in the dictionary. Ask a student to read the definition to the class. What are the key words used to describe pampas? List "nearly treeless grassland in South America." How is this similar to a savanna? How is it different from a savanna? What does nearly treeless mean? Do pampas have to be in South America? Where do we find savannas? Have students write the word PAMPAS and a definition of PAMPAS, using their own words.

3. Write the word STEPPE on the chalkboard. Have students locate STEPPE in the dictionary. Ask a student to read the definition out loud. What words describe a steppe? List: vast, semiarid, grass covered, plain. What does vast mean? If you do not get a correct response, tell them vast means large. Arid means dry like the desert. What do you think semi-arid means? What does grass covered mean? What is a plain? Have students write a definition for steppe in words they can understand. Have students read their definitions.

4. Write the word EQUATOR on the board. Ask a student to point to the equator on the map. Have students locate the word EQUATOR in the dictionary. Ask a student to read the definition aloud. Is that definition easy to understand? How would you define EQUATOR so we could more easily understand and remember it? Have students write their own definitions.

5. Write SUB-CONTINENT on the board. Have students locate the word SUB-CONTINENT in the dictionary. Ask a student to read the definition aloud. Point out India on the map. India is a SUB-CONTINENT. Have students write SUB-CONTINENT and its definition using their own words.

6. Which is easier to remember: the dictionary definition or your own definition? When we want to remember something, we should first write it in our own words. In what other subjects do you have to learn the meaning for new words? Would it be a good idea in these subjects to re-write the meaning in your own words? If you had trouble writing a definition in your own words, who could you ask for help?

7. Now we are going to practice using these new words by playing a computer game. The game gives you a definition and you are to choose the right answer from two possible answers.

8. Remind the students of the correct method for handling disks and tell them to insert disk into drive "A". The students should turn on the monitors and computer power. The program is self-loading.

9. When the menu appears, instruct the students to select game 2. There follows a game using the new terms. The game will repeat itself if the student does not get at least 70 percent of the answers correct.

10. Allow the students a reasonable time to complete the computer-directed activity. Suggested time is ten minutes.

Summary:

1. Where are the pampas located?
2. What is a sub-continent?
3. What do we call flat treeless grasslands in warm climates?
4. What is a steppe?
5. What do we call the line that goes around the middle of the Earth?
6. Why is it easier to remember our own definitions?

Homework:

1. How are steppes, pampas and savannas similar?

2. How are they different?

3. Use your textbook to list:
   a. a country that has a pampa
   b. a country that has a savanna
   c. a country that has a steppe

4. Draw a picture of what you think a steppe, pampas and savanna look like. Label the pictures.

Enrichment:

Using library materials, such as an encyclopedia, make a chart of animals likely to be found in each of these regions:

savanna	equatorial Africa
pampas	sub-continent of India
steppe	

MAP SKILLS

Topic 4: Primary and Intermediate Directions

Aim: How do directions help us use a map?

Performance Objectives: Students will be able to:

- identify a compass rose
- draw and label a compass rose using primary and intermediate directions
- locate places using primary and intermediate directions

Materials:

- MS DOS computer lab
- software: Map Skills by NYC Board of Education
- handout sheet: Pencil City

Motivation:

Write the word Columbus on the chalkboard. Ask students: "Who was Columbus? How did Columbus determine in which direction he was headed on his voyage of discovery?" Discuss how sailors determined directions before the invention of the compass and astrolabe. Ask: "How is the compass direction north different from the direction north as determined from the North Star?"

Development:

1. Draw a compass rose on the chalkboard. Elicit from students where the labels north, south, east, and west should go. Have students copy compass rose into their notebooks. "What are the intermediate directions?" Elicit a response from students, and label on board.

2. Instruct students that the Map Skills program will teach them about primary and intermediate directions using three parts: a reading, a diagram and six multiple choice questions. Instruct students to work at their own pace.

3. To start the program, insert DOS diskettes into disk drive A and turn on the computer and monitor. When the screen asks for the date and time, type them in and press the ENTER key. When A and a blinking cursor appear on the screen, type in BASICA and press ENTER. When the computer finishes loading BASICA, remove the DOS diskette and insert Map Skills into disk drive A. Press the F3 key. The screen will display LOAD". Type in SSCAI and press ENTER. When the screen displays OK a second time, press the F2 key. After the first three screens are viewed, type I or T to indicate IBM or Tandy and press ENTER. When the menu appears, students names may be typed in to record individual performances.

4. Move cursor down to highlight module 1 - Primary Directions. Press ENTER to begin program.

5. Instruct students to copy pertinent information contained in the reading selections into notebooks.

6. After module 1 is completed, students should return to the menu, select module 2, Intermediate Directions, and complete that selection.

7. Allow students 10 to 15 minutes to complete computer-directed activities and self-contained review.

Summary:

1. What are the four primary directions?
2. How are the directions determined?
3. What are the four intermediate directions? Why are they called intermediate?
4. If you were facing directly north, which direction would be to your left? your right?
5. If you were facing directly south, which direction would be to your left? your right?
6. What are the intermediate directions between north and south?
7. How does a compass rose help you to distinguish between north and south?

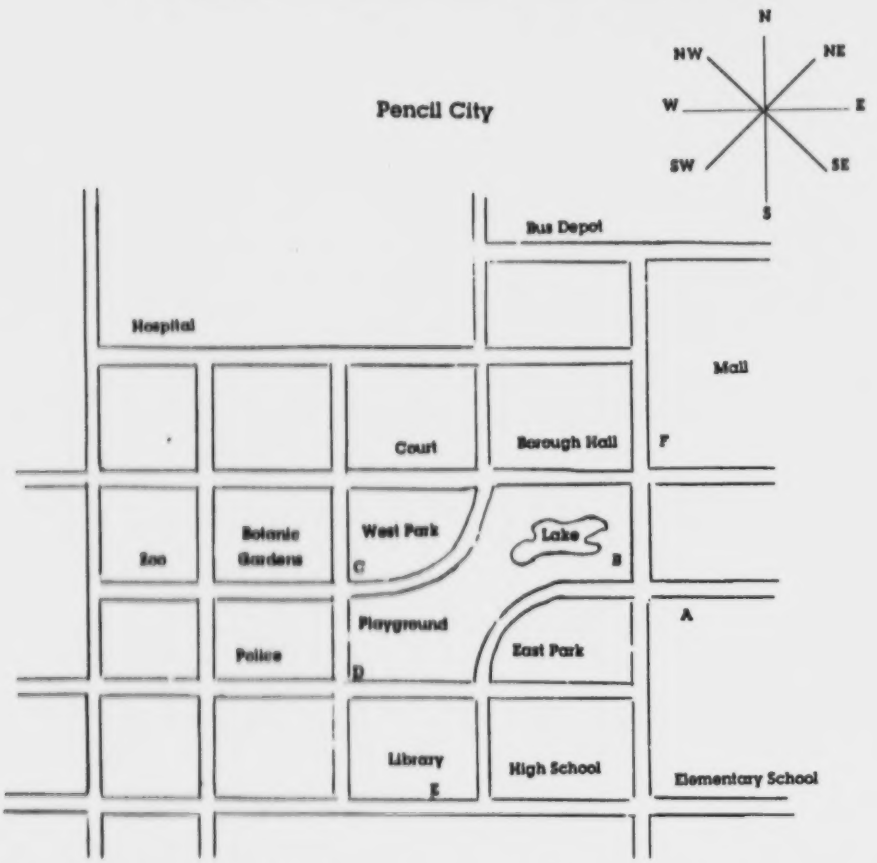
Homework:

Prepare individual copies of Pencil City handout sheet. Distribute these to students. Instruct students to answer the questions in Parts A and B using the maps of Pencil City.

Enrichment:

Follow the newspaper headlines for two weeks. List the names of the countries that are in the news. Next to each country, write in the directions for traveling to each location from your own community. Include the major land and water forms that you must travel over to reach your destination.

Primary And Intermediate Directions



PART A

1. A student in the high school wants to visit the Mall after school. In which direction would the student travel?
2. A worker from the Botanic Gardens is bringing a plant display to the elementary school. In which direction will the worker travel?
3. A shopper at the Mall needs to return a library book. In which direction would the shopper travel?
4. The Mayor will be attending a ribbon cutting ceremony at the zoo. In which direction will the Mayor travel?
5. The librarian wants to visit the Hospital. In which direction will the librarian travel?

PART B

The Mayor of Pencil City has ordered new signs to be erected at various places indicated by dots and letters on the map. Which signs go Where?

1. _____ SCHOOL - EAST
2. _____ LAKE - NE
3. _____ LIBRARY - SOUTH
4. _____ MALL - SE
5. _____ POLICE - SW

Topic 5: Street Map

Aim: How can we read a street map?

Performance Objectives: Students will be able to:

- plot a course on a street map
- locate given buildings on a street map
- recognize and interpret pictorial symbols
- draw an aerial view of the classroom

Materials:

- Apple II computer lab
- software: Small Town U.S.A. by Island Software
- aerial photograph of a city/town/neighborhood

Motivation:

Display the aerial photograph. Explain that this photograph was taken looking down from a helicopter or airplane. Ask the students to describe what they see.

Development:

1. Ask the students:

   How is a map different from this photograph? (Elicit the following responses: Maps are clearer. Details can be left out to make it easier to locate something on a map.)

   When would a map be more useful than an aerial photograph? Explain.

   Why do maps use symbols? (Symbols are used to represent real things.)

   Do symbols have to look like the objects they stand for? Explain.

2. Discuss the purpose of a map key.

3. Tell the students that the program they are about to use will help them to get practice using a street map.

4. Students load the Program. The first screen displays a map of Small Town, U.S.A. An aerial view is seen, with each building represented by a box with a capital letter inside of it. Have the students guess what each letter stands for before the computer displays the key.

5. Instruct the students to press the space bar. They are now asked if they want directions. Tell them to Press Y for yes. Then tell them to press Y, again, to see the Key. (NOTE: It might be helpful to make a large oaktag list of this key, since the computer's key scrolls up the screen very fast.)

6. Instruct the students to follow the directions, and press RETURN after typing in each answer.

Summary:

1. What features do you see in an aerial photograph?
2. Which of these features are also shown on a map?
3. If you were traveling through N.Y. City, would you rather have an aerial photograph or a city map? Explain.

Homework:

Draw an aerial view of the classroom, using symbols and a map legend.

Enrichment:

Where can you find help when you need it? Using a map of N.Y. City, locate the police stations, fire stations, hospitals, schools, and your home. Write down the fastest routes from your home to these places.

Topic 6: Scale (Middle Elementary)

Aim: How can we show distance on a map?

Performance Objectives: Students will be able to:

- . define scale
- . determine the distance between places by using a map scale
- . explain the importance of using a map scale
- . create a neighborhood model using blocks or boxes

Materials:

- . Apple II computer lab
- . software: Small Town U.S.A. by Island Software
- . large display of Small Town U.S.A. map
- . student photograph
- . wool

Vocabulary: scale, distance

Motivation:

Take the class on a neighborhood walk. During this walk, have the students note the buildings and the number of blocks between certain buildings.

After the class has returned to school, ask the following questions:

Can we draw a picture of our neighborhood walk?
Will this picture be the same size as the neighborhood?

Development:

1. Ask the students:
   What is a scale?
   What can we weigh on a scale? (food, people)

2. Tell the students that the word scale has another meaning. Show them a photograph of one of the students. Have the student hold the photo.

   How is this photo the same/different from the person?

   Tell the students that this photograph is a "scaled-down" version of the student. It is exactly the same as the real person, except for its size.

   How can we make a neighborhood map in the same way?

4. Help the students to select two of the buildings they passed during the neighborhood walk to begin to make a map. Choose a different student to draw each building.

   How many blocks were between these two buildings? (Use lengths of wool to represent each block.)

   How can we show this on a map?
   Depict other buildings in this way until the map is finished.
   Include a map scale at the bottom of the map, showing that each length of wool equals one block.

4. Tell the students that the program they are about to use will help them to understand the use of maps and map scales.

5. Students load the program. The first screen displays a map of Small Town, U.S.A. An aerial view is seen, with each building represented by a box with a capital letter inside of it. Have the students guess what each letter stands for before the computer displays the key.

6. Instruct the students to press the space bar. They are now asked if they want directions. Tell them to press Y for yes. Then, tell them to press Y again to see the key. (NOTE: It might be helpful to make a large oaktag list of this key, since the computer's key scrolls up the screen very fast.)

7. Instruct the students to follow the directions, and press RETURN after typing in each answer.

Summary:

Demonstrate that a long distance in the neighborhood may be represented by a short distance by building a model of the neighborhood using toy blocks. (NOTE: Each block walked during the trip should be represented by one toy block to show scale.)

Homework:

How many blocks from the school do you live? Draw a map of your walk home from school. Include a map scale.

Enrichment:

Make a scale drawing of different objects. You might include your bed, the kitchen table, the tub, the wall, your mother, and anything else you can think of using. Include a scale for these drawings.

Topic 7: Primary Map Directions

Aim: How can we master the primary map directions?

Performance Objectives: Students will be able to:

- list the four primary directions
- use a map compass
- label directions on a map
- locate places on a map using primary directions
- trace routes on a map
- state reasons for the use of the four primary directions

Vocabulary: cardinal (primary) directions, symbol, map, legend, location, distance

Materials:

- Apple II computer lab
- software: Stickybear Town Builder by Weekly Reader
- neighborhood map
- homework worksheet

Motivation:

Pretend that the Mayor is coming to visit this school and that he has just gotten out of the subway exit. If he asked you for help, what directions would you give?

Development:

1. Using a map of the neighborhood, which includes a directional compass, ask the students to describe the most direct route from the subway exit to the school.

2. Ask the students if their suggested directions are understandable enough for a visitor to the school to follow.

3. Discuss the directional compass. Explain that a compass has four directions: North, South, East, and West.

   Why do maps have compass points indicated? (to show directions on the map)

4. Tell the students that the program they are about to use will clarify the use of map directions.

5. Students load the disk. After the red disk drive light goes off, instruct students to press (K) to use the keyboard.

6. The main menu will appear on the screen. Instruct the students to use the Up or Down arrow keys to position the car symbol next to "Load a Town," and then press the RETURN key. A list of three permanently-stored towns will appear. Use the Up or Down arrow keys to move the car symbol next to one of these towns, then press the RETURN key.

7. Press the ESC (escape) key to get back to the main menu. Instruct the students to use the Up or Down arrow keys to move the car symbol next to "Take a Drive," then press the RETURN key.

8. The town will appear at the top of the screen. The text at the bottom of the screen will display the direction in which you must move the car to find the first key.

   Next to the text is a compass showing the direction in which to go, and twelve boxes representing the keys to be found. There is also a fuel gauge.

9. The students should be directed to find as many keys as they can before the fuel runs out. They get points for each key they find. When they reach the symbol where a key is hidden, a cloud with the key in it will appear. Then the computer shows in which direction to go to find the next key.

10. To return to the main menu at any time during the game, press the ESC key.

Summary:

1. Where is the directional key located on the map?
2. What direction is at the top of the screen?
3. What direction is at the left of the screen?
4. How many directions are listed on the school map?
5. Why must all maps have a directional?
6. If we are traveling from the subway station (or any common point) to the school, in what directions would we be traveling?

Homework:

Prepare a rexographed town map, labeling the names of the buildings and places. Have the students do the following:

1. Label a directional for the map.
2. Label the four primary directions on the map.
3. Make a list of directions needed to travel from p]ace to place around the map.

Enrichment:

Using the homework map rexograph sheet, write a mystery story about the town. Use primary directions to describe where the clues are discovered and how the mystery is solved.

Topic 8: Directions And Distance

Aim: How do we tell direction and distance on a map?

Performance Objectives: Students will be able to:

- identify directions on a map or globe
- define the four main compass directions - north, east, south, west
- define the halfway compass directions - northeast, southeast, southwest, northwest
- state which way to move in going from one place to another
- explain how to measure distance on a map
- calculate distance using a graphic scale marked in a given unit of measurement
- determine the location we end up at when given a direction and a distance from an established point

Materials:

- Apple II computer lab
- software: Maps and Globes: Understanding Maps and Globes by Troll Associates
- copies of a road map
- homework worksheet: map of an imaginary island, attached

Motivation:

Teacher points to road map displayed in front of the class and explains that in recent lessons discussion has centered on many things found on maps. Ask:

- How do we know which way to hold these road maps?
- What on the map tells us how to lay the map down so that we are looking at it properly?

Development:

1. Based on the above questions, as background for the content of this program develop the following:

1.1 Elicit from a student that the map must be placed on the desk so that the compass rose shows that the top of the map is facing away from the student. Explain that the top of the map is now facing north. Mark N for north on the road map.

1.2 Elicit from another student which direction is towards the student. Explain that the bottom of the map is now facing south. Mark S for south on the road map.

1.3 Elicit from another student which direction is towards the right of the student. Explain that the right side of the map is now facing east. Mark E for east on the road map.

1.4 Elicit from another student which direction is towards the left of the student. Explain that the left side of the map is now facing west. Mark W for west on the road map.

2. Teacher draws a large circle on the board and marks the circle with the four compass directions. Teacher explains that in addition to these

directions there is a halfway point between north and east called northeast. Teacher marks NE halfway between north and east; SE for southeast between south and east; SW for southwest between south and west; and NW for northwest between north and west. Teacher instructs the students to place NE, SE, SW and NW on the compass rose of the road map at their seats.

3. Direct the students to find eight cities on the road map and circle their locations. Picking one city to start from, elicit from the students in which direction we would travel when going from one city to another. Do this until all eight directions of the compass rose are given as examples.

4. Ask students how we are able to tell how far one city is from another by use of the map. Explain that on all road maps there is a "map scale." This is used to measure how far one place is from another. Have the students find the map scale. Have them make a duplicate of the scale along the edge of a piece of note paper. Demonstrate how to find the distance between two cities. Picking the two closest cities, use the edge of the note-paper map scale line up the two cities. The distance is read off the note paper map scale. Teacher shows another example and then has the students calculate the distance between the marked cities that are near one another. Continue until students develop skill in measuring with the piece of paper.

5. Explain to the students that many of the concepts on directions and distance will be reviewed in the software program they are about to use. If a mistake is made, the computer will give them a second chance at getting the correct answer. If they are wrong twice, the computer will then give the correct answer and continue with the program.

6. Load the program. The program is self starting after some questions are asked. At the menu, tell the students to choose #4 - Directions and distance. When the computer asks for disk #2, take out disk #1, place disk #2 in the drive and press Return for the program to continue. Tell them to follow the directions on the screen when asked to answer a question.

Summary:

1. What are the four compass rose directions on a map?
2. What are the four halfway points called between the four major compass directions?
3. What purpose does the map scale serve on a map?
4. Using a piece of paper, how can we calculate on a map the distance between two cities?

Homework:

1. Using the prepared homework sheet which has a map scale legend, location of ten cities, and treasure map directions, have the students travel the island to ten different cities to find a hidden treasure which is located a certain distance from one of the ten cities. Given a starting location marked on the map, the students must move a certain direction and distance on each move and list the city in which they end up. They must use a paper map scale to help tell distance on the map. They must trace the route they travel on the map. From the first city they move to the second city and so forth until the treasure is located. The student marks an X on the spot of the treasure.

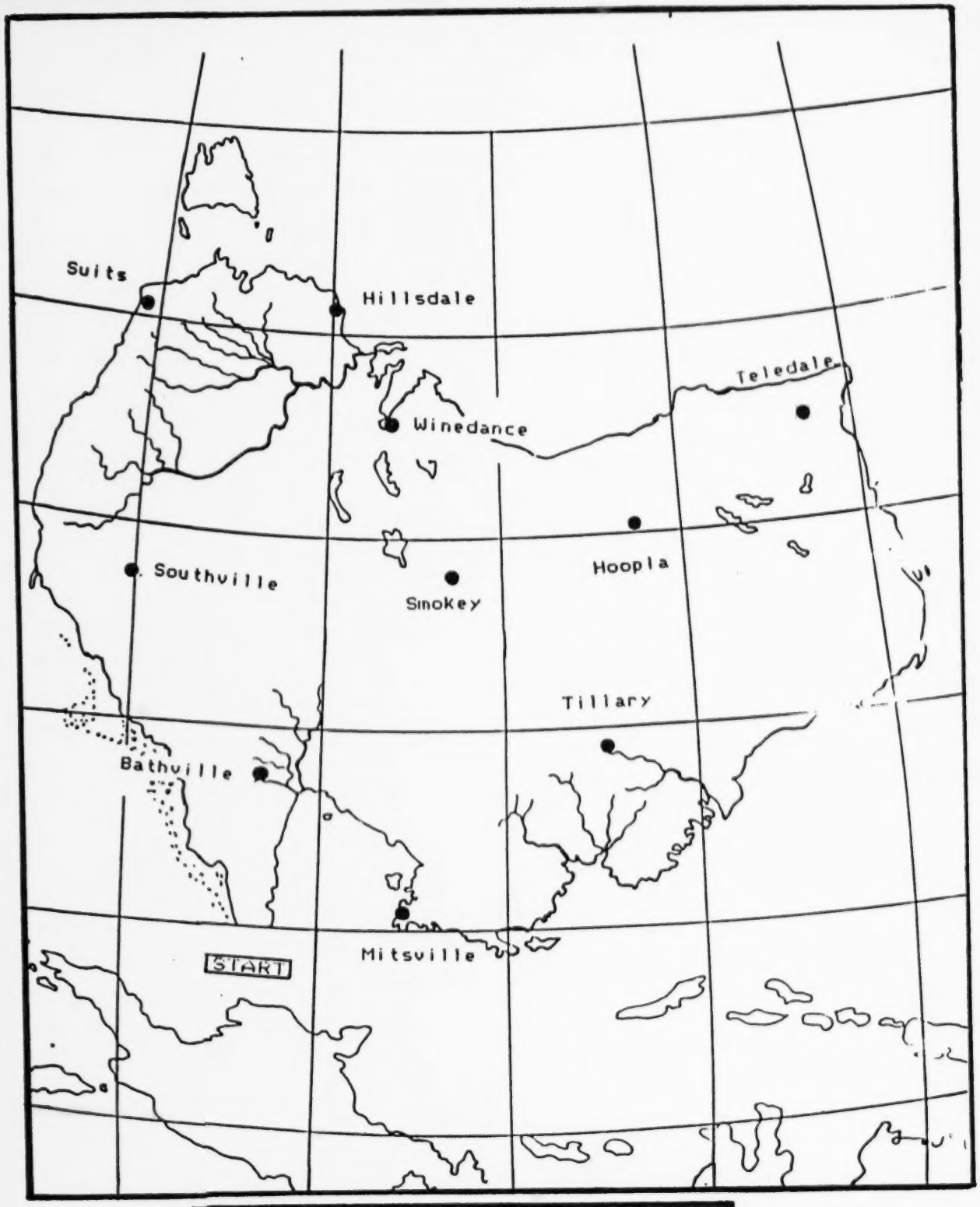
2. Students trace a route from one city to another on the homework sheet. Teacher tells the students that the treasure is hidden in the last city. Students are to write the direction and distance from "start" to each city until the treasure city is reached. Students are to use a paper made map scale for distance.

   Students are to use this format:

   From "start", go east until you reach _____.
   From _____ go _____ until you reach _____.
   From _____ go _____ until you reach _____.
   .
   .
   .
   This is the treasure city.

Enrichment:

Draw a street map of your neighborhood (about five blocks square), using your home as the approximate central point of your map. Include in your map a compass rose and map scale as well as the locations of various buildings, e.g., friends' homes, stores, public buildings. On a separate sheet of paper: (a) explain how you determined your distance scale, (b) make up a treasure hunt using at least five clues.



SCALE IN KILOMETERS

0 1 2 3 4 5 6 7 8 9 10

Class: _____ Name: _____

Can you find the treasure?

Directions: The following is a treasure map found in a wall of a very old and abandoned house. See if you can follow the directions on the map and locate the treasure.

From "start":

1. Go 4 kilometers north. What city is there? Answer: _____
2. Go 10 kilometers northeast. What city is there? Answer: _____
3. Go 8 kilometers northwest. What city is there? Answer: _____
4. Go 4 kilometers west. What city is there? Answer: _____
5. Go 6 kilometers south. What city is there? Answer: _____
6. Go 7 kilometers east. What city is there? Answer: _____
7. Go 5 kilometers southeast. What city is there? Answer: _____
8. Go 6 kilometers southwest. What city is there? Answer: _____
9. Go 10 kilometers north. What city is there? Answer: _____
10. Go 9 kilometers east. What city is there? Answer: _____
11. Treasure is 2 kilometers southwest of this city. Mark the spot with an X.

Topic 9: Map Of A Neighborhood

Aim: How can a neighborhood be represented on a map?

Performance Objectives: Students will be able to:

- make map plans
- devise symbols for maps
- compare the relative distance and the shortest distance between places depicted on maps
- draw a town map
- locate places on a map

Vocabulary: map, distance, symbol, location, legend, key, services

Materials:

- Apple II computer lab
- software: Stickybear Town Builder by Weekly Reader
- large paper
- magic markers
- ruler

Motivation:

Take the class on a neighborhood walk.

Development:

1. Discuss the students' experiences on the walk. What buildings, people, and objects did they see? What neighborhood services were available? What buildings were far away/close to the school?

2. Help the students to use paper and magic markers to make a map of the neighborhood, including connecting streets.

3. Discuss the use of map legends and symbols.

   Draw symbols such as the following on the board:

   Ask students:

   What does each picture represent or stand for?

   Suppose you wanted to represent a car on a small map. How could you show this? (Elicit as an appropriate drawing to represent car.)

   Every time you see on the map you will know this is a symbol of a car.

   What is a symbol?

Place this sentence on the chalkboard:

Long ago, people made up a legend to explain thunder and lightning.

What is a legend? (a story or an explanation of something.) Explain that one kind of legend is found on a map. A legend explains symbols on the map.

What is a key? (a key opens or unlocks a lock)

Explain that on a map, the legend is also called the key because it reveals (or unlocks) the meaning of the symbols on the map.

What symbols can we use for our neighborhood map?

Help the student draw an appropriate legend and label the map using the chosen symbols.
Explain the meaning of goods and services.

4. Tell students that the program they are about to use will help them to build a town and take a trip around that town.

5. Students load the disk. After the red disk drive light goes off, instruct students to press (K) to use the keyboard.

6. After (K) has been chosen, the main menu will appear. Instruct the students to use the Up or Down arrow keys to position the car symbol next to Build a Town, and then press the RETURN key.

7. Build a Town allows the students to construct their own town from scratch. There are three symbols on the bottom of the screen. These are the symbols that can be chosen to help build the town. The center symbol will always be flashing and is the one that the computer is ready to move. Press the left or right arrow key until the symbol you want is flashing. Press the RETURN key. Wait for the flashing symbol or a black rectangle to appear in the upper left-hand corner of the screen. You can then move the symbol or the rectangle around the map by using the arrow keys. Press RETURN to permanently place the symbol on the screen.

8. Keep choosing symbols in this manner. Roads will be built automatically to connect the chosen symbols to other parts of the town. If a symbol is incorrectly placed, you will hear a beep.

9. When the students have finished building their towns, instruct them to press the ESC (escape) key to return to the main menu. They can use the arrow keys to position the car symbol next to Take a Drive, then press the RETURN key.

10. The town will appear at the top of the screen. At the bottom of the screen, the words GO TO THE will be followed by a symbol. The X next to the symbol shows where the car should be driven to. The car has already been placed somewhere on the map.

11. To the right of the instructions, there is a fuel gauge. The object of the game is to drive the car to as many places as you can before you run out of fuel. The student must use the arrow keys to drive to the designated spot. Press the space bar to stop the car.

12. Each time a correct symbol is reached, a star will appear and points will be added to the score.

13. To return to the main menu at any time during the game, press the ESC key.

Summary:

1. Why do we use a maps?
2. What does a map legend tell us?
3. Where is the map legend usually located?
4. Explain how the legend shows man-made features?
5. Why are symbols used?
6. How can we tell distances on a map?
7. What services are depicted on the map, if any?

Homework:

1. Draw a picture of a town.
2. Use streets to connect the buildings.
3. Make a legend for your town; include symbols.

Enrichment:

Using a bulletin board, students can connect their towns with roads.

1. What are the similarities and differences between your town and those of other students?
2. What services can the towns share?
3. What is needed to make the towns better places in which to live?

Topic 10: Uses Of Map Colors

Aim: How are colors used on different kinds of maps?

Performance Objectives: Students will be able to:

- describe how colors on a map distinguish between land and water features and continents
- interpret a map legend of different: colors used in maps that show temperature, rainfall, population density and elevation
- define such terms as: temperature, precipitation, population density, elevation

Vocabulary: temperature, precipitation, population density, elevation

Materials:

- Apple II computer lab
- software: Maps and Globes: Understanding Maps and Globes by Troll Associates
- world map
- textbook of maps showing any one of these: annual rainfall map, population density map, elevation map, forest land and vegetation map, and product and resources map
- homework worksheet: outline map of the North America

Motivation:

Teacher points to wall map of the world, and explains that in recent lessons various colors have appeared on maps used.

Teacher leads discussion to these questions:

- Why does the map of the world have different colors on it?
- Do you think it is necessary to use the same color for the same place on every map? Explain.
- Who decides what color to use on a map?
- Explain that whoever makes the map decides on the colors to use and explains in the legend of the map how the colors are used.

Development:

1. Explain that there are various kinds of maps. Have the students locate in their social studies textbook various types of maps that are made. Stress that on each of these types of maps color is used in different ways and that the legend is the key to understanding the kind of information provided by the map. Depending on the maps found in the textbook, ask students to interpret what the map shows. Reinforce with other maps showing any of the following: average monthly temperature, annual precipitation, population density, elevation, forest land and vegetation, and products and resources.

2. After the students have seen various types of maps, turn to the rainfall map. Stress the legend and how color (or shade) is used to show various amounts of rainfall. Ask student questions about:
   1. What color (shade) shows the most rainfall?
   2. What color (shade) shows the least rainfall?
   3. If you moved from one given city to another, would you expect to have the same amount of rain, less rain or more rain?

4. If you moved to (a given) city, how much rainfall would you expect?

3. After viewing the software, students should be able to look at any map legend and understand how color is used. In the software to be used, maps will deal with temperature, rainfall, population density, and elevation.

4. Load the program. The program is self starting after some questions are asked. At the menu, tell the students to choose #2 - Map Colors. This program will introduce information similar to that developed above and then test understanding of ideas and terms. Remind students to press the space bar to make the program move along. When a multiple-choice question is given, just press the letter of the correct answer and the program highlights that response and tells the student if the answer is correct or not.

5. Allow 10-15 minutes for students to finish the program.

Summary:

1. How do mapmakers use blue on a map?
2. How does a mapmaker show that there are seven continents on a world map?
3. What information does a precipitation map show?
4. In what way is a population map important?
5. What kind of map would you use to see determine the height of a city relative to sea level?
6. Define these terms: precipitation, elevation, temperature, and population density.

Homework:

Using the outline map of the North America have the students do the following:

1. Color in blue the location of the: Atlantic Ocean, Pacific Ocean, Arctic Ocean, Gulf of Mexico and major rivers and lakes.
2. Choose any color and label the location of Canada and Mexico.
3. Choose any colors and create a map legend that shows one of the following: the elevation of various parts of the United States, the amount of rainfall in the United States, where certain vegetation grows in the United States, the population density of various sections of the United States.

Enrichment:

Play "The Map Color Game." Students are formed into five teams. Each team is given photocopied maps made from the social studies textbook. Teacher prepares ten questions based on the content of color depicted on the different maps. After each question, leaders of each group must run up to their section of the chalkboard and write the answer. Whoever gives the correct answer gets five points for their team. Team leaders change after each question and members of each team can help in finding the answers on the maps. At the end of ten questions, the team with the most points wins.

Topic 11: Map Symbols

Aim: What kinds of map symbols are found on maps?

Performance Objectives: Students will be able to:

- distinguish between map symbols for natural features and those for cultural features
- recognize legend map symbols for the following: mountain, lake, river, desert, railroad, road, boundary, city, bridge and capital
- identify legend map symbols of an imaginary island
- explain legend map symbols used on a products and resources map
- create a map using legend map symbols

Vocabulary: legend, symbols, natural features, cultural features, capital

Materials:

- Apple II computer lab
- software: Maps and Globes: Understanding Maps and Globes by Troll Associates
- class copies of a road map
- textbook maps dealing with products and resources of a state or country
- homework worksheet (outline map of Canada included at end of plans)

Motivation:

Teacher points to a road map posted before the class, and asks:

- Why do people use a road map?
- Where is the legend of map symbols located on the road map?
- What symbols are located on a road map?

Development:

1. From the map legends available to them, elicit from students map symbols for each of the following: mountains, forests, rivers, lakes, desert, railroad, road, boundary, city, bridge, capital. Ask individual students to come up to the board and draw the map symbol next to the representative word.

2. Explain that some maps show what is naturally found on the land that the map represents. Some things that were man made are cultural features added to the map. Using N for natural and C for cultural, have individual students come up to the board and mark each map symbol accordingly.

3. Have students refer to a products and resources map found in their textbook. Explain that such a map shows where important manufactured items are made, where mineral resources are found, where different types of farming are found, and where certain livestock are raised. Ask students to find the map legend. Ask what map symbols are used on the map. List the words on the board. Ask individual students to come up to the board and draw each map symbol next to the representative word.

4. Explain to the students that in the program they are about to use many of the map symbols and meanings listed on the board will be seen again. They will also be shown maps of imaginary places and be asked questions about them. Remind them to always refer to the map legend to get help in

finding the correct answer.

5. Load the program. The program is self starting after some questions are asked. At the menu, tell the students to choose 3 - Map Symbols. When the computer asks for disk #2, take out disk #1 and place disk #2 in the drive and press Return for the program to continue. Remind students to press the space bar to make the program move along. When a multiple-choice question is given, just press the letter of the correct answer. The program highlights the response and tells the student if the answer is correct or not.

6. Allow 10-15 minutes for students to finish the program.

Summary:

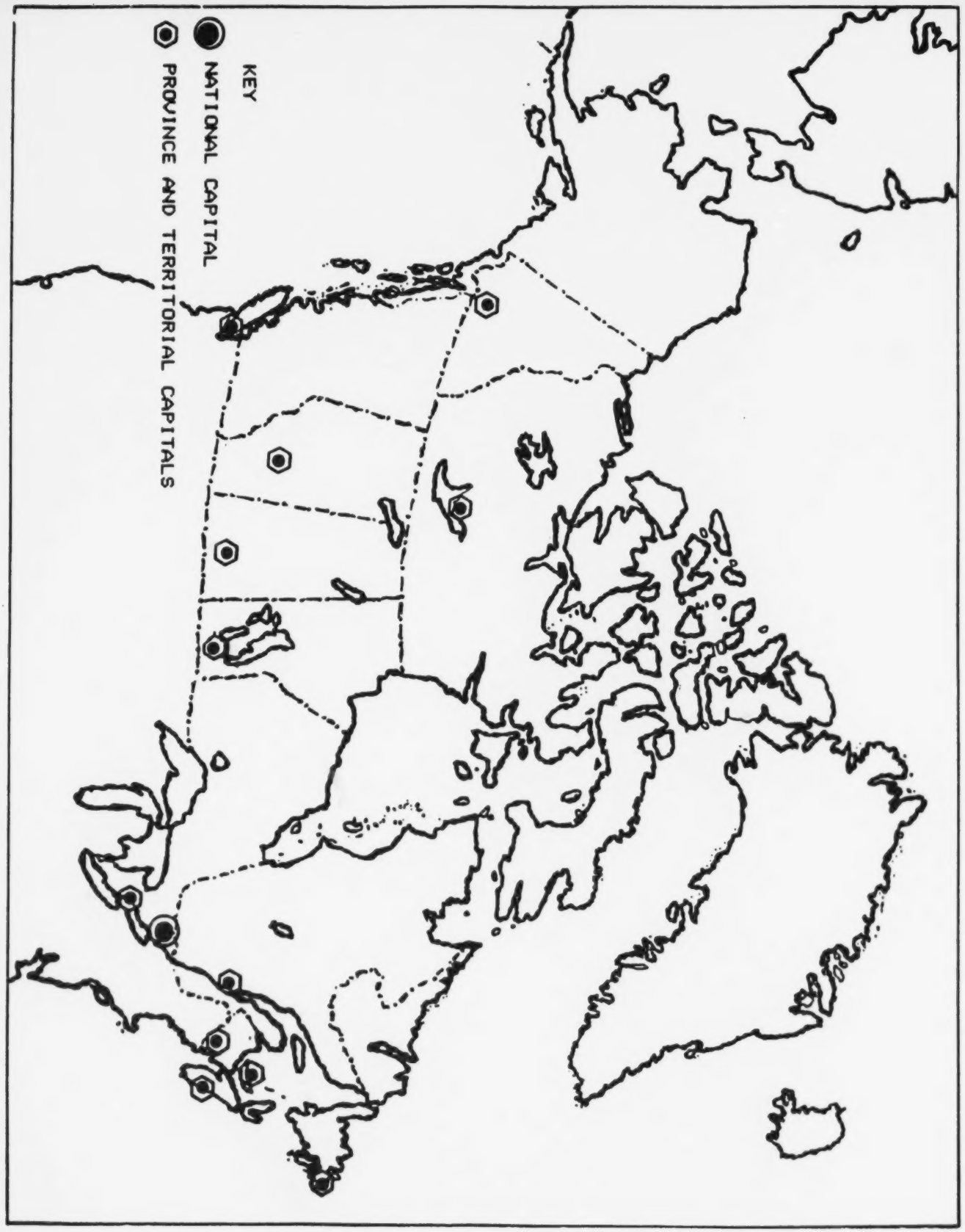
1. Describe five natural map symbols.
2. Describe five cultural map symbols.
3. What is shown on a product and resources map?
4. When you created the map of Australia in the program, what kinds of legend map symbols were needed?

Homework:

Using the outline map of Canada, create a map symbol legend and mark the map with the following:
a. names of the provinces
b. names of the territorial capitals of each province
c. name of the national capital of Canada
d. location of products and resources of Canada

Enrichment:

Create map of an imaginary island. On the island create legend map symbols that show the following:
a. a mountain range
b. location of rivers, lakes, forests, and a desert
c. the principal cities and capital city
d. roads and bridges connecting cities
e. location of railroads
f. products and resources found on the island.


KEY
NATIONAL CAPITAL
PROVINCE AND TERRITORIAL CAPITALS

Topic 12: Comparing Flat Maps And Globes: Direction; Symbols

Aim: How can we tell in which direction we are going on a map?

Performance Objectives: Students will be able to:

- recognize map symbols used to represent the oceans and continents
- explain distortion of the true shape of the earth by flat maps
- identify lines and locations such as: the equator, the International Date Line, the Prime Meridian, and the North and South Pole
- explain how we get the four hemispheres: northern, southern, eastern, and western
- explain the compass rose and the four cardinal directions - north, east, south, and west
- state directions when given locations of two places on a map

Vocabulary: capital, city, compass rose, distance, distortion, equator, globe, hemisphere, International Date Line, island, legend, location, map, map key, model, North Pole, Prime Meridian, South Pole, sphere, symbol

Materials:

- Apple II computer lab
- software: Language of Maps - Series B - Location and Distance by Focus Media
- world map, globe, student textbook showing a flat map of the world, orange
- homework worksheet: outline map of the world

Motivation:

Display a globe and a wall world map. Elicit that both the globe and the map represent the earth. Ask:

What do the globe and the map show that is the same?
What are the differences between a globe and a map?

Development:

1. List on the board the answers to the first question. Use them as an inventory of what students know about maps and globes. Elicit that both the map and globe show the oceans of the world and the continents.

   Ask individual students to find the the locations of the following on both globe and map: Atlantic Ocean, Pacific Ocean, Arctic Ocean, Indian Ocean, North America, South America, Africa, Europe, Asia, Australia, Antarctica, North Pole and South Pole.

2. Elicit that the fundamental difference between a globe and a map is that one is round and the other is flat. Locate a flat map in the textbook. Contrast with the classroom globe. Ask students to look carefully first at the globe and locate Greenland. Do the same on a flat map. Ask the students if they notice a difference.

   Explain that Greenland appears to be bigger on the map than on the globe. This distortion occurs on all maps, because a round ball map of the earth is being made into a flat map. It is hard to make something flat if it was round. So map makers stretched some land and made some oceans bigger

to show the continents as true to size as possible. Stress that all maps have distortion.

3. Elicit the meanings and pronunciations of the new words in the vocabulary. Explain that the meanings of these words will also be explained in the glossary of terms in the program they will use. If students do not know the meaning of a word, they just press "G" and the computer will show an alphabetical listing of the words and meanings.

4. Using the wall map of the world, call students' attention to certain (imaginary) lines that are drawn. Using a crayon or non-permanent marker, show where each of the following is located on the map: Prime Meridian, Equator and International Date Line.

5. Explain that each of these lines has certain functions on maps of the earth. Taking an orange to represent the earth, draw the above-mentioned lines on it. Explain that cutting the orange in half along the equator divides the world into the Northern Hemisphere and Southern Hemisphere. Separating the pieces, show how the earth is divided in half.

6. Placing the orange together again, line up the Prime Meridian: if we cut the orange along this line, the world is then divided into the eastern and western hemispheres. Anything to the right of the Prime Meridian to the International Date Line is the Eastern Hemisphere. Anything to the left of the Prime Meridian to the International Date Line is the Western Hemisphere. Separating the pieces, show how the earth is divided in half this way.

7. Have students come up to the flat map and globe to point out each hemisphere. Label each hemisphere with its proper name.

8. Explain that the world map also shows directions to us. Any movement towards the north pole is called north. Any movement toward the South Pole is south. Any movement to the right is called east. Any movement to the left is called west.

9. Draw and label a compass rose on the blackboard. Ask students for answers to these questions:

    1. In what direction do you travel to get from the board to the classroom windows?
    2. In what direction do you travel to get from the board to the classroom door?

10. Load Series (B) Program disk #1 titled - Finding Your Way on Maps. The program is self-starting after some questions are asked. Explain that in the program they are about to use, they will see examples similar to the above. The program will explain and test for understanding of the concepts. Remind students to press space bar to make the program move along and Return after choosing answers to multiple-choice questions asked by the program.

11. Allow 15-20 minutes for students to complete the Program.

<u>Summary</u>:

1. Define these terms: capital, city, compass rose, distance, distortion, equator, globe, hemisphere, International Date Line, island, legend, location, map, map key, model, North Pole, Prime Meridian, South Pole, sphere, symbol.

2. In what ways are a flat map of the world and a globe different?
3. If we divide the world in half along the equator, what hemispheres are created?
4. If we divide the world in half along the Prime Meridian and International Date Line, what hemispheres are created?
5. What are the four cardinal directions on a map?

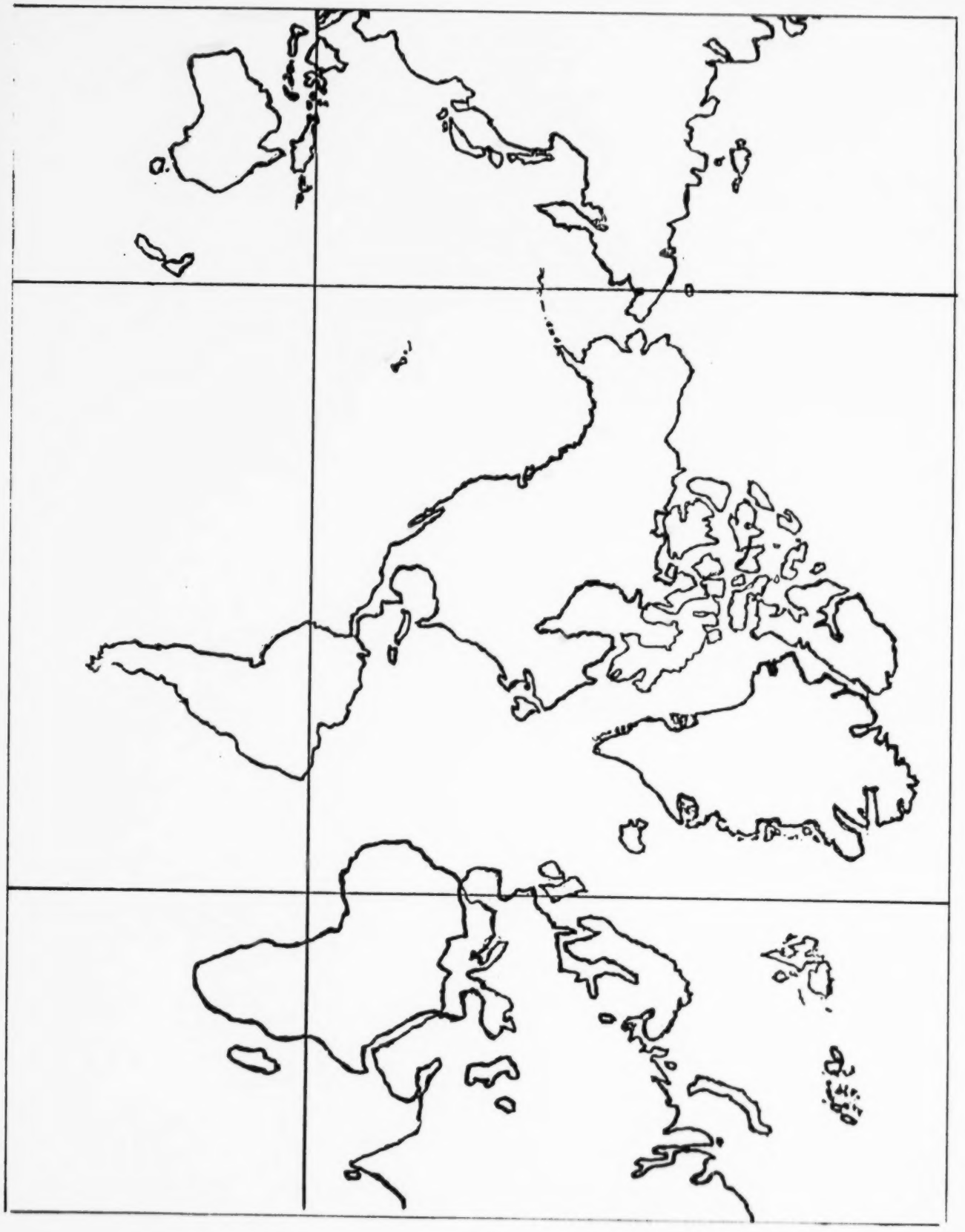
Homework:

Using the outline map of the world, have the students do the following:

1. Label the following lines on the map: equator, Prime Meridian, and International Date Line,
2. Draw a compass rose on the map.
3. Label the following continents on the map: North America, South America, Europe, Asia, Africa and Australia.
4. Label the four oceans on the map: Atlantic, Pacific, Arctic, and Indian.
5. Which continents are only in the northern hemisphere?
4. Which continent, shown on the map, is totally in the southern hemisphere?
7. Which two continents are both in the northern and southern hemispheres?
8. Which two continents are in the western hemisphere?
9. Which four continents are in the eastern hemisphere?
10. If you go from North America to Europe, in what direction do you travel?
11. If you go from North America to Asia, in what direction do you travel?
12. If you go from Australia to Asia, in what direction do you travel?
13. If you go from Europe to Africa, in what direction do you travel?

Enrichment:

Write a story in diary form about an imaginary sailing trip around the world. Include at least ten entries on map markings and directions that you might have used.



Topic 13: Finding Places On Maps

Aim: What do we use to find places on a map?

Performance Objectives: Students will be able to:

- explain the cardinal directions on a compass - north, east, south, west
- explain the intermediate directions on a compass - northeast, southeast, southwest, northwest
- identify lines of latitude on a globe and a map
  identify lines of longitude on a globe and a map
- locate missing degrees for lines of latitude and longitude
- locate places on a map when given lines of latitude and longitude

Vocabulary: compass rose, degree, equator, hemisphere, International Date Line, latitude, longitude, map, Meridian, parallel, Prime Meridian, route, sphere

Materials:

- Apple II computer lab
- software: Language of Maps - Series B - Location and Distance by Focus Media
- world map, globe, student textbook map of the United States
- homework worksheet: outline map of the United States

Motivation:

Display a globe and a wall world map. Recall that in prior lessons we discussed how the equator, Prime Meridian and International Date Line help in dividing the globe into four hemispheres. Lead discussion of these questions and have students locate and label the information on the wall map.

- On the wall map, where is the equator?
- Into what hemispheres does the equator divide the earth?
- On the wall map, where is the Prime Meridian?
- Where is the International Date Line on the world map?
- Into what hemispheres do the Prime Meridian and the International Date Line divide the earth?

Development:

1. Ask a student to find the compass rose on the world map. Ask another student to explain what the directions north, east, south and west mean on the compass rose.

   Ask students to state the intermediate directions on a compass rose. Draw a compass rose on an end panel of the chalkboard and elicit review: that in addition to north, south, east and west there are halfway points called the intermediate directions. Halfway between north and east is northeast. Halfway between east and south is southeast. Halfway between south and west is southwest. Finally, halfway between west and north is northwest.

   Place in the center of the board the name of a city called Homestead. Around Homestead write the name of other cities called: Doubleville, Clarkdale, Heep, Slowpoke, Whistlestop, Johnston, Harper, and Yellowstone. Vary the location of the other cities around Homestead so that all possible compass rose directions are shown. Explain to the

students that we are going to travel by bus to the other cities to visit friends. Starting at Homestead, ask individual students to tell what direction one city is from another, until we make a stop at all the cities. Also trace the route taken on the board.

2. Using both the globe and the wall map, review the more precise way to find places. First recall that there are imaginary lines running north and south from the North Pole to the South Pole. These are called meridians or lines of longitude. The Prime Meridian and the International Date Line divide the world into eastern and western hemispheres. Pointing to the top of the world map, explain that the lines of longitude are numbered in degrees. Starting at the Prime Meridian and going east the numbers go from 0 degrees to 180 degrees. Anything to the right of the Prime Meridian is called east longitude. Starting at the Prime Meridian and going west the numbers also go from 0 degree to 180 degrees. Anything to the left of the Prime Meridian is called west longitude.

3. Using both the globe and the wall map, review the imaginary lines running west and east parallel to the equator. Explain that these lines never cross each other. They always stay the same distance from one another. These are called lines of latitude. The equator divides the world into northern and southern hemispheres. Pointing to the side of the world map, explain that the lines of latitude are numbered in degrees. Starting at the equator and going north the numbers go from 0 degrees to 90 degrees. Anything from the equator to the North Pole is called the northern hemisphere. Starting at the equator and going south the numbers also go from 0 degrees to 90 degrees. Anything from the equator to the South Pole is called the southern hemisphere.

4. Elicit that if we know the longitude and latitude of a place on the earth, we can then find it easily. Ask individual students to try to find the continent when the following longitudes and latitudes are given:

   a. 15 degrees east longitude and 15 degrees north latitude
   b. 15 degrees east longitude and 50 degrees north latitude
   c. 105 degrees east longitude and 60 degrees north latitude
   d. 60 degrees west longitude and 15 degrees south latitude
   e. 90 degrees west longitude and 45 degrees north latitude
   f. 135 degrees east longitude and 30 degrees south latitude
   g. 65 degrees west longitude and 70 degrees south latitude

5. Have students pronounce and define the new words given in the vocabulary. The meanings of these words, may also be found in the glossary of terms in the program they will use. If they do not know the meaning of a word, they press "G" and the computer will show an alphabetical listing of the words and meanings.

6. Ask the students to turn to a textbook map of the United States that gives longitude and latitude. Ask students to find out what states are closest to these latitudes and longitudes.

   a. 82 degrees west longitude and 30 degrees north latitude
   b. 100 degrees west longitude and 42 degrees north latitude
   c. 115 degrees west longitude and 40 degrees north latitude
   d. 100 degrees west longitude and 30 degrees north latitude
   e. 80 degrees west longitude and 35 degrees north latitude

7. Load Series (B) Program disk #2 titled - Finding Places on Maps. The program is self starting after some questions are asked. Explain that in

the program they are about to use, they will deal with locational examples similar to the above. The program will explain and test for understanding of the concepts. Remind students to press space bar to make the program move along and Return after choosing answers to multiple-choice questions asked by the program.

8. Allow 15-20 minutes for students to finish the program.

Summary:

1. Define these terms: compass rose, degree, equator, hemisphere, International Date Line, latitude, longitude, map, meridian, parallel, Prime Meridian, route, sphere.
2. What are the four primary directions on a compass rose?
3. What are the intermediate directions on a compass rose?
4. Explain the direction of lines of longitude or meridians.
5. Into what hemispheres do lines of longitude divide the world?
6. Explain the direction of lines of latitude.
7. Into what hemispheres do lines of latitude divide the world?
8. How do we find a place on the globe or map by using lines of longitude and latitude?

Homework:

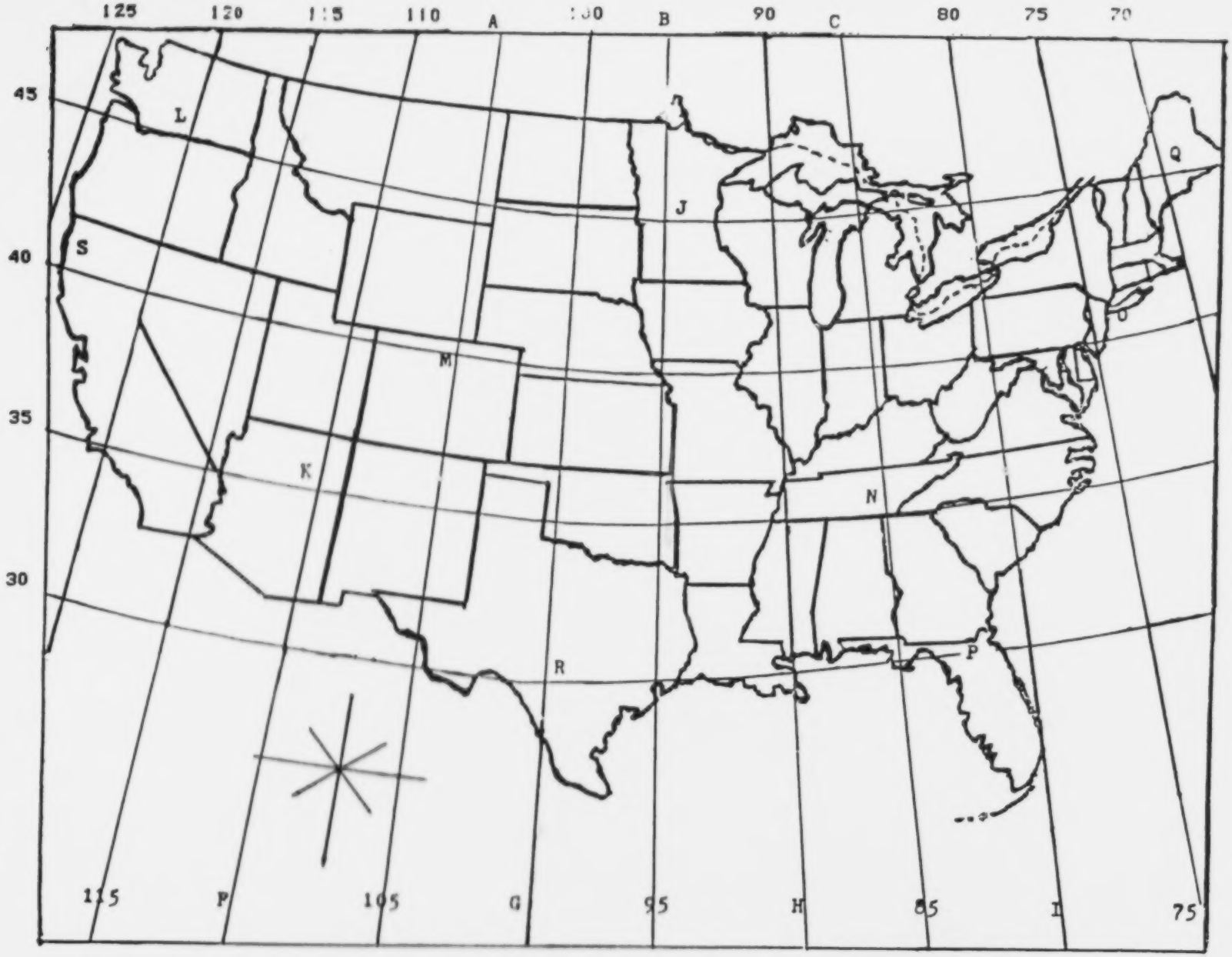
Using the outline map of the United States, have the students do the following:

1. Label the compass rose with the cardinal and intermediate directions.
2. Label the missing degrees for lines of longitude for the letters A, B, and C at the top and for the letters F, G, H, and I at the bottom of the map.
3. Label the missing degrees for lines of latitude for the letters D and E on the right side of the map.
4. Find the letter of the alphabet on the map that is closest to these longitudes and latitudes:

a. 110 degrees west longitude and 35 degrees north latitude
b. 70 degrees west longitude and 45 degrees north latitude
c. 120 degrees west longitude and 45 degrees north latitude
d. 100 degrees west longitude and 30 degrees north latitude
e. 82 degrees west longitude and 30 degrees north latitude
f. 78 degrees west longitude and 41 degrees north latitude
g. 95 degrees west longitude and 45 degrees north latitude
h. 105 degrees west longitude and 40 degrees north latitude
85 degrees west longitude and 35 degrees north latitude
j. 123 degrees west longitude and 42 degrees north latitude

Enrichment:

Lets go on balloon trip. Mark the map and tell what direction you would go for each of the following:
a. Starting at city P in what direction do you travel to get to city N?
b. From city N in what direction do you travel to get to city K?
c. From city K in what direction do you travel to get to city M?
d. From city M in what direction do you travel to get to city S?
e. From city S in what direction do you travel to get to city L?
f. From city L in what direction do you travel to get to city Q?
g. From city Q in what direction do you travel to get to city O?
i. From city O in what direction do you travel to get to city J?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Topic 14: Latitude And Longitude (Finding Buried Treasure)

Aim: Can you find a pirate's sunken treasure on the map

Performance Objectives: Students will be able to:

- explain lines of latitude
- explain lines of longitude
- determine degrees and minutes on a grid line of latitude
- determine degrees and minutes on a grid line of longitude
- locate a sunken treasure using degrees and minutes of lines of latitude and longitude

Vocabulary: hemisphere, Prime Meridian, equator, latitude, longitude

Materials:

- Apple II computer lab
- software: Voyage of the Mimi - Maps and Navigation by Holt, Rinehart, and Winston, Publishers
- world map
- textbook world map
- handout: map grid

Motivation:

Point to a wall map of the world, and ask students to open their textbook to a world map. Ask:

- What are the imaginary lines that run east and west on the map?
- What are the imaginary lines that run north and south on the map?
- Why does the map of the world have lines running west and east, and north and south?

Development:

1. Develop the understanding that the enormous size of the earth makes these lines essential to the location of any place on the map. Pointing to the equator, tell the students that if the world were divided in half along the equator, we would have two hemispheres, one called the northern hemisphere, located between the equator and the North Pole, and the other the southern hemisphere, located between the equator and South Pole. Point out the imaginary lines that go west and east. Explain that they are parallel lines that never cross one another. They always stay the same distance from one another. Tell the students that there are 90 lines that go around the globe from the equator to the North Pole and 90 lines that go around the globe from the equator to the South Pole. Each line is called a degree. The world map and your social studies textbook do not show all the lines.

2. Pointing to the Prime Meridian, elicit that this line runs north and south around the world. If the world were divided in half along the Prime Meridian, we would have two hemispheres, called the eastern hemisphere, located between the Prime Meridian and the International Date Line, to the right of the Prime Meridian. The western hemisphere is located between the Prime Meridian and the International, to the left of the Prime Meridian. Looking at the map, point out the imaginary lines that go north and south. Tell the students that there are 180 lines that go around the globe from the North Pole to the South Pole in the eastern

hemisphere and another 180 lines that are in the western hemisphere. Each line is called a degree. The world map and your social studies textbook do not show all of these lines.

3. Give the students a copy of the handout at the end of the lesson plans entitled Map Grid.

   Review: horizontal lines are lines of latitude; vertical lines are lines of longitude. By knowing both locations, latitude and longitude, we can locate any place on this map.

   Make a chalkboard representation of the map grid and demonstrate to the students how they can find a buried underwater treasure located at latitude 26 degrees and longitude 87 degrees on their maps. Tell them that they first have to find the 26 degree latitude line. Then they go along this line until they come to the 87 degree line of longitude. Instruct them to place a T where both lines intersect. That is the location of the underwater treasure.

   Ask individual students to find underwater buried treasure at these locations:

   a. Place a Y at 27 degrees latitude and 89 degrees longitude
   b. Place a Z at 25 degrees latitude and 85 degrees longitude
   c. Place a V at 28 degrees latitude and 86 degrees longitude
   d. Place a W at 26 degrees latitude and 85 degrees longitude

4. Pointing to the board representation of the map grid, explain that there are five marks between each of the numbers. Point to the five marks between latitude 25 and 26 degrees. Tell the students that there are 60 "minutes" between each line of latitude and longitude. Each of the five marks represents 10 minutes.

   Have the students fill In their map grid with 10, 20, 30, 40, and 50 next to each mark between numbers of latitude and longitude. Tell the students that we can locate underwater buried treasure by using degrees and minutes. Tell the students to place a T at 25 degrees 20 minutes and 84 degrees 40 minutes. Tell them that they first have to find the 25 degree 20 minute latitude line. Then they go along this line until they come to the 84 degree 40 minute line of longitude. Instruct them to place a T where both lines intersect. That is the location of the underwater treasure.

   Ask individual students to find underwater buried treasure at these locations:

   a. Place a P at 27 degrees 10 minutes latitude and 89 degrees 40 minutes longitude
   b. Place a M at 26 degrees 50 minutes latitude and 85 degrees 30 minutes longitude
   c. Place a N at 25 degrees 40 minutes latitude and 86 degrees 10 minutes longitude
   d. Place a L at 25 degrees 30 minutes latitude and 87 degrees 20 minutes longitude

5. Tell the students that the program they are about to use will add to the explanation of how to locate places. If you want to understand this better, then in the beginning of the program when you see "Do you want directions? (Y/N)," press Y for Yes and then Return. Then press #2 - See how to read the Pirate's Chart. This part explains the above using

computer graphics.

6. Load disk #1 side A. Choose 1 - Pirate's Gold. The program is self starting. When the students see the question, "Do you want directions? (Y/N)," press Y and then press Return. At the next screen press 1 - See the Rules. After reading the rules, at the menu go to 3 - Play the Game. This program will introduce concepts similar to those developed above and challenge you to find buried underwater treasure. Remind students to press the Return key to make the program move along.

7. Allow 10-15 minutes for students to finish the program.

Summary:

1. In which direction do lines of latitude go around the earth?
2. In which direction do lines of longitude go around the earth?
3. How many minutes are there between each degree latitude and longitude?
4. How do lines of latitude and longitude help us in finding a place on the globe?

Homework:

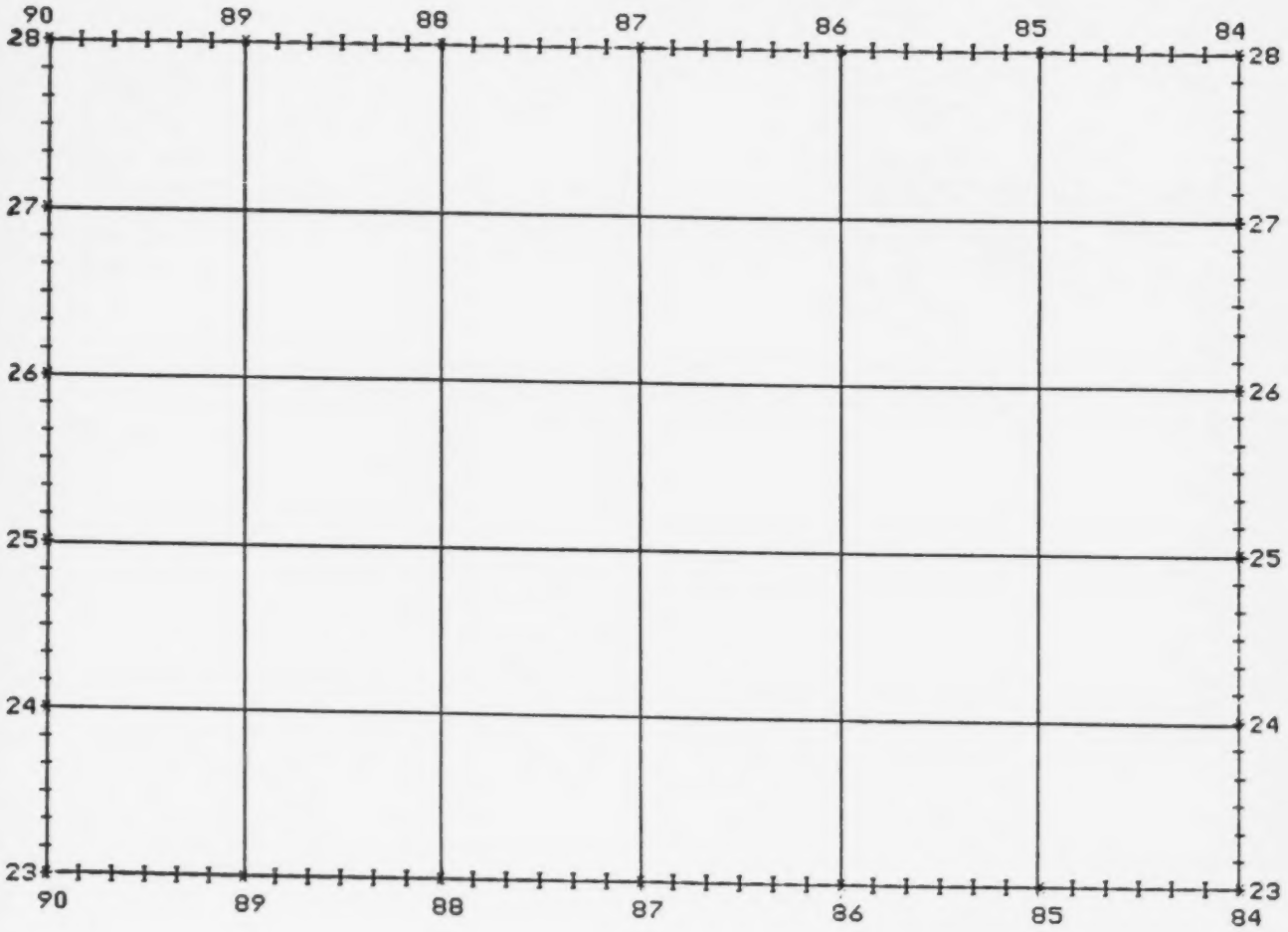
Using the copy of the Map Grid at the end of this lesson plan, have the students mark where these pieces of treasure are located:

1. Silver spoons are located at 25 degrees latitude and 89 degrees longitude. Mark an SP on the map grid where they are located.
2. Gold doubloons are located at 27 degrees latitude and 86 degrees longitude. Mark a GD on the map grid where they are located.
3. Several cannons are located at 26 degrees latitude and 87 degrees longitude. Mark a C on the map grid where they are located.
4. Platewares are located at 25 degrees latitude and 88 degrees longitude. Mark an PL on the map grid where they are located.
5. Jewelries are located at 28 degrees latitude and 85 degrees longitude. Mark an J on the map grid where they are located.
6. Gold bars are located at 25 degrees 20 minutes latitude and 85 degrees 30 minutes longitude. Mark a GB on the map grid where they are located.
7. Muskets are located at 26 degrees 30 minutes latitude and 87 degrees 50 minutes longitude. Mark a M on the map grid where they are located.
8. Swords are located at 27 degrees 40 minutes latitude and 89 degrees 10 minutes longitude. Mark a S on the map grid where they are located.
9. Gold Goblets are located at 26 degrees 50 minutes latitude and 84 degrees 20 minutes longitude. Mark a GG on the map grid where they are located.
10. Gold trinkets are located at 25 degrees 50 minutes latitude and 85 degrees 50 minutes longitude. Mark a GT on the map grid where they are located.

Enrichment:

Compose a "Locate the Buried Treasure" game to be played by your classmates, using a grid of lines of latitude and longitude as clues.

Map Grid



Topic 15: Measuring Distance On Maps

Aim: How can we measure distance on a map?

Performance Objectives: Students will be able to:

- describe latitude and longitude as tools of locating places on a map
- identify time zones on a map
- explain what time zones mean on a map
- read a map scale and define the unit of measurement
- calculate the distance between points on a map
- locate places on a map when given lines of latitude and longitude

Vocabulary: capital, centimeter, compass rose, distance, kilometer, latitude, location, longitude, map, meridian, metric measure, parallel, Prime Meridian, scale, scale of miles, sphere, time zone

Materials:

- Apple II computer lab
- software: Language of Maps - Series B - Location and Distance by Focus Media
- world map, globe, student textbook map of the United States
- homework worksheet (outline map of the United States included)

Motivation:

With reference to a globe and then to a wall world map, review prior discussions on how the equator, Prime Meridian and International Date Line help in dividing the globe into four hemispheres, and that to find places on the globe or map we use lines of longitude and latitude. Ask tese review questions:

1. Which direction do lines of longitude or meridians go around the globe?
2. How many degrees longitude are there in the eastern hemisphere?
3. How many degrees longitude are there in the western hemisphere?
4. Which directions do lines of latitude go around the globe?
5. How many degrees latitude are there in the northern hemisphere?
6. How many degrees latitude are there in the southern hemisphere?

Development:

1. Recall that if we know the longitude and latitude of a place on the earth, we can then find it easily. Instruct students to open their textbooks to a map of the world. Ask students to locate countries on the world map by the following longitudes and latitudes (individuals are called on to point them out on the wall world map):

   a. 100 degrees west longitude and 40 degrees north latitude
   b. 120 degrees west longitude and 60 degrees north latitude
   c. 60 degrees east longitude and 60 degrees north latitude
   d. 20 degrees east longitude and 20 degrees north latitude
   e. 60 degrees west longitude and 30 degrees south latitude
   f. 170 degrees east longitude and 40 degrees south latitude
   g. 20 degrees east longitude and 50 degrees south latitude

2. Ask the students to turn to a textbook map of the United States that gives longitude and latitude. Ask students to find out what states are closest to these longitudes and latitudes.

   a. 110 degrees west longitude and 43 degrees north latitude
   b. 77 degrees west longitude and 35 degrees north latitude
   c. 120 degrees west longitude and 35 degrees north latitude
   d. 90 degrees west longitude and 40 degrees north latitude
   e. 105 degrees west longitude and 35 degrees north latitude

3. Call upon students to pronounce and define the words in the vocabulary. The meanings of these words may also be found be explained in the glossary of terms in the program they will use. If they do not know the meaning of a word, they must press G and the computer will show an alphabetical listing of the words and meanings.

4. Pointing to the world map, explain that longitudes are also used to divide the world into time zones. Explain that there is one hour of time difference for every 15 degrees longitude. When a baseball team plays an afternoon west coast game at 3:00 PM in the afternoon, it is 6:00PM in New York City. There is a difference of 3 hours. California is three times zones away from New York City.

   Pointing to the wall map of the world, mark a line along longitude 60 degrees and 80 degrees west longitude. State that we live in this time zone. Mark 95 degrees west longitude. State that everyone who lives between 80 degrees and 95 degrees west longitude is one hour behind whatever time it is in our time zone. If our time is 2:00 PM then their time is 1:00 PM.

   Mark 110 degrees west longitude. State that everyone who lives between 95 degrees and 110 degrees west longitude is two hours behind whatever time it is in our time zone. If our time is 2:00 PM then their time is 12:00 PM.

   Mark 125 degrees west longitude. State that everyone who lives between 110 degrees and 125 degrees west longitude is three hours behind whatever time it is in our time zone. If our time is 2:00 PM then their time is 11:00 PM.

   When we are watching a baseball game on television at 8:00 PM in the evening in our time zone, it is starting to get dark outside. However, the television set shows that the game in California is in bright daylight. California is three times zones away from us. Darkness is three hours away for California.

5. Points to a wall map of the United States. Instruct students to find a map of the United States in their textbook. Ask students if the United States on the wall map is bigger than the textbook map. Explain that one map looks bigger than another but the size of the United States never changes. One map is bigger because it is drawn to a different scale. Elicit the definition of scale and recall its use on other maps (road maps).

   On the bottom of each map is a scale unit of measurement. It can be in miles or kilometers. By using this scale we can measure distance from one point to another. Find the scale on the United States map in the textbook.

Tell students that in order to measure distance, we must remake the scale on an edge of a piece of paper. Instruct the students how to reproduce the map scale on the edge of a piece of paper.

After the teacher picks out the names of two cities near one another, have the students measure the distance of one point from another using the map scale. Do this with other cities on the map of the United States.

6. Tell the students that in the program they are about to use, the culminating activity makes them a detective and by using all the map skills they have learned, they must find within eight moves the location of a missing American Flag.

7. Load Series B Program disk #3 titled - Measuring Distances on Maps. The program is self starting after some questions are asked. Explain that in the program they are about to use, they will perform examples similar to the above concepts. The program will explain and test for understanding of the concepts. Remind students to press the space bar to make the program move along and Return after choosing answers to questions asked by the program.

8. Allow 15-20 minutes for students to finish the program.

Summary:

1. Define these terms: capital, centimeter, compass rose, distance, kilometer, latitude, location, longitude, map, meridian, metric measure, parallel, Prime Meridian, scale, scale of miles, sphere, time zone.
2. How do we use lines of longitude and latitude to find a place on a map?
3. How is a time zone defined?
4. Explain why California is three hours behind our time.
5. Why do we have a map scale?
6. How do you measure the distance from one place to another using a map scale?

Homework:

Using the outline map of the United States, have the students answer these questions:

Give a compass rose direction as an answer for the following:

a. If you are in the city of Miami, in what direction do you fly to get to Washington D.C.?
b. If you are in the city of Nashville, in what direction do you fly to get to the city of New York?
c. If you are in the city of Chicago, in what direction do you fly to get to the city of Kansas City?
d. If you are in the city of Santa Fe, in what direction do you fly to get to San Francisco?
e. If you are in the city of Bismarck, in what direction do you fly to get to the city of Houston?
f. If you are in the city of Chicago, in what direction do you fly to get to the city of Salt Lake City?
g. If you are in the city of Bismarck, in what direction do you fly to get to the city of Chicago?
h. If you are in the city of Chicago, in what direction do you fly to get to New York City?

2. Given the following lines of longitude and latitude, which cities on the map are the closest:

   a. 105 degrees west longitude and 30 degrees north latitude
   b. 74 degrees west longitude and 42 degrees north latitude
   c 123 degrees west longitude and 37 degrees north latitude
   d. 95 degrees west longitude and 29 degrees north latitude
   e. 87 degrees west longitude and 36 degrees north latitude
   f. 100 degrees west longitude and 46 degrees north latitude

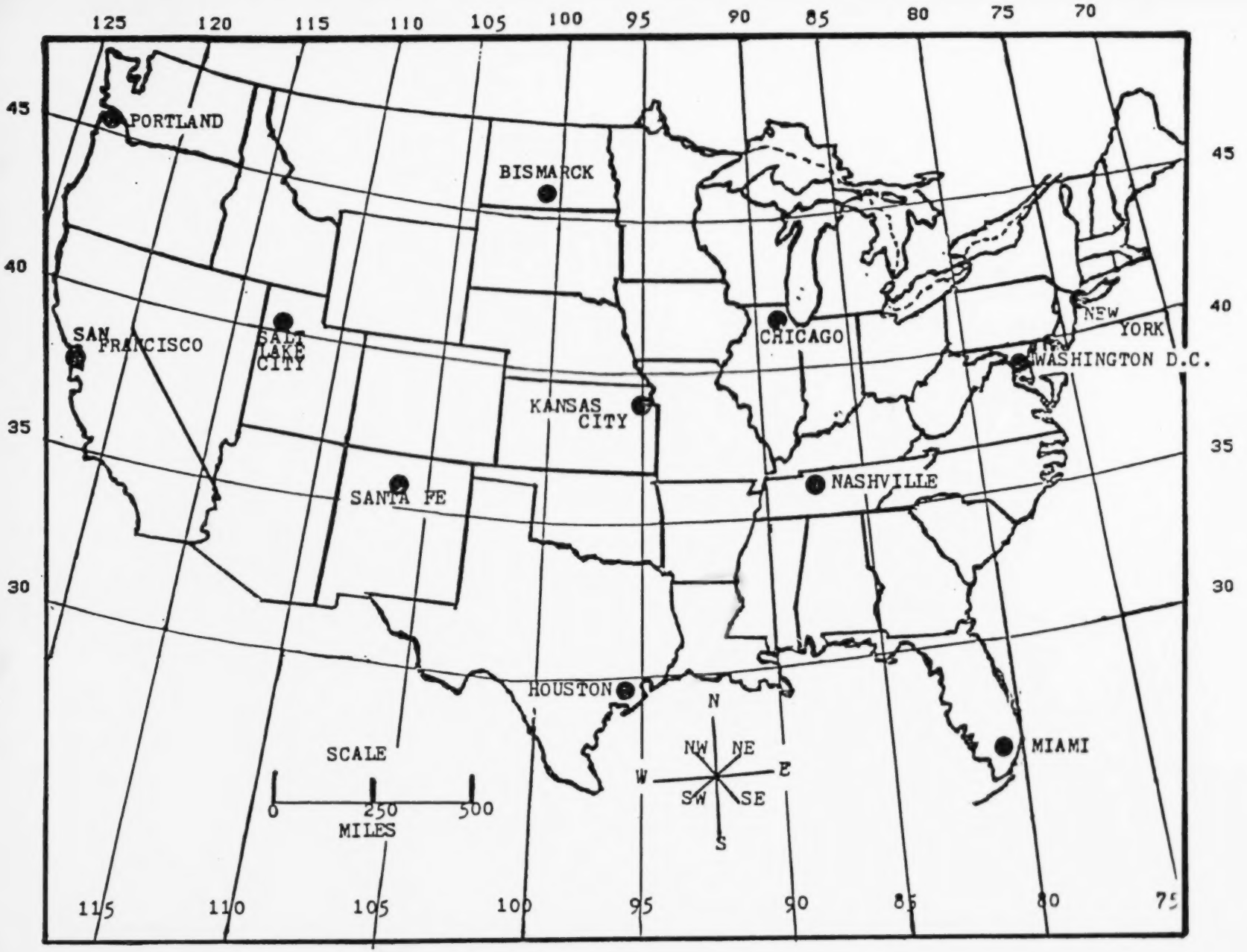
3. For the following use a map scale to measure how far one city ia from another, and circle the correct answer:

   a. How far is Washington D.C. from New York?
      approximately: 250 miles 500 miles 750 miles 1000 miles
   b. How far is San Francisco from Salt Lake City?
      approximately: 250 miles 500 miles 750 miles 1000 miles
   c. How far is Nashville from Miami?
      approximately: 250 miles 500 miles 750 miles 1000 miles
   d. How far is Salt Lake City from Santa Fe?
      approximately: 250 miles 500 miles 750 miles 1000 miles
   e. How far is Bismarck from Chicago?
      approximately: 250 miles 500 miles 750 miles 1000 miles
   f. How far is Santa Fe from Chicago?
      approximately: 250 miles 500 miles 750 miles 1000 miles

Enrichment:

Be a detective and follow the clues to capture a most wanted criminal. All you have to do is name the city the fugitive is in and you win if that is the correct city.

Clue #1 - Start at Houston. Travel north until you get to the first city on the map. What city is that?
Clue #2 - Leave the city above and travel 500 miles southeast? What city is there?
Clue #3 - Leave that city and travel to the city that is at 95 degrees west longitude and 29 degrees north latitude. What city is that?
Clue #4- Leave that city and travel approximately 750 miles northwest. What city is there?
Clue #5 - Leave that city and travel west for 500 miles then turn and travel northwest another 500 miles. What city is there?
Clue #6 - Travel east 500 miles and find the crook. What city is the crook in?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Topic 16: What Globes Tell Us About The Earth

Aim: What can we learn from looking at a globe?

Performance Objectives: Students will be able to:

- define a globe
- explain the ideas of rotation, tilt and axis of the earth
- explain why we have night and day
- demonstrate how a globe shows national boundaries, cities, and ocean currents
- describe the use of different colors for: oceans, seas, mountains, valleys, and plateaus
- name and locate the seven continents
- describe how the earth is divided into hemispheres by the equator, and the Prime Meridian
- explain how lines of longitude and latitude are arranged around the globe
- locate a place on the globe using lines of latitude and longitude
- explain the differences between globes and maps

Vocabulary: globe, rotation, tilt, axis, boundaries, currents, oceans, seas, mountains, valleys, plateau, equator, hemisphere, Prime Meridian, longitude, latitude, North America, South America, Europe, Africa, Asia, Australia, Antarctica

Materials:

- Apple II computer lab
- software: A First Program About Globes by January Productions, Inc.
- globe, world map, picture of earth taken from space, flashlight
- homework worksheet: outline map of the world with lines of latitude and longitude

Motivation:

Hold up a picture of earth taken from space and lead discussion on:

- When astronauts are in outer space looking at the earth, what do they see?
- What makes the various colors on the picture?
- As the spaceship gets closer to earth, what else do you think the spacepeople will be able to see?
- Explain that a globe is used to show many things that are seen on the earth from space.

Development:

1. Pointing to globe, call upon students to explain why we use a globe as opposed to flat maps. Have students note that the globe does not stand upright and explain why this is so. After spinning it, elicit why the globe is made to turn.

2. After darkening the classroom, have students use a flashlight on the globe to demonstrate what causes night and day.

3. Lead students to the understanding of what the various colors on the globe depict. Have students explain how various countries and cities are shown. Ask students to locate the seven continents and to name them.

Label them on the wall map of the world. Ask a student to explain how the globe shows in which direction the water of the oceans travels.

4. Referring to the globe, ask students to explain how the earth is divided into the northern and southern hemispheres. Have the student draw a line across the equator on the wall map of the world showing this. Label each hemisphere on the wall map.

5. Using both a globe and map of the world, have a student explain the purpose of the lines that run east and west on the globe. Mark these lines on the map of the world.

6. On a globe, ask a student to explain how the globe is divided into the eastern and western hemispheres. Have a student draw a line on the Prime Meridian of the wall map of the world showing this. Label each hemisphere on the wall map.

7. Using both a globe and map of the world, have a student explain the purpose of the lines that run north and south on the globe. Mark these lines on the wall map of the world.

8. Pointing to a wall map of the world and a globe, have a student explain the differences between the two.

9. Tell the students that the program they are about to use will clarify concepts on globes. The program will also test their understanding of these concepts. Explain that they will have no problem in finding the secret word in the test at the end of the computer program. Each group is to privately tell the teacher what the word is at the end of the lesson.

10. Load the program. The program is self starting after some questions are asked. Remind students to press Return to move the program along or after an answer to a multiple-choice question is chosen.

11. Allow 10-15 minutes for students to work on the program.

Summary:

1. In what ways are a flat map and globe alike/different?
2. Why do we use a globe?
3. Explain why a globe is tilted on its axis and is able to rotate?
4. Why does one part of the earth have daylight and the other part of the world have darkness at any given time?
5. Why does a globe have different colors on it?
6. What are the names of the seven large land masses on the globe?
7. Explain how the equator and Prime Meridian divide the world up into four hemispheres.
8. What are the names of the four hemispheres?

Homework:

Using the outline map of the World that has latitude and longitude have the students do the following:

1. Color in and label the seven continents.

2. Divide the map into the four hemispheres and label each.

3. Color and label the oceans.

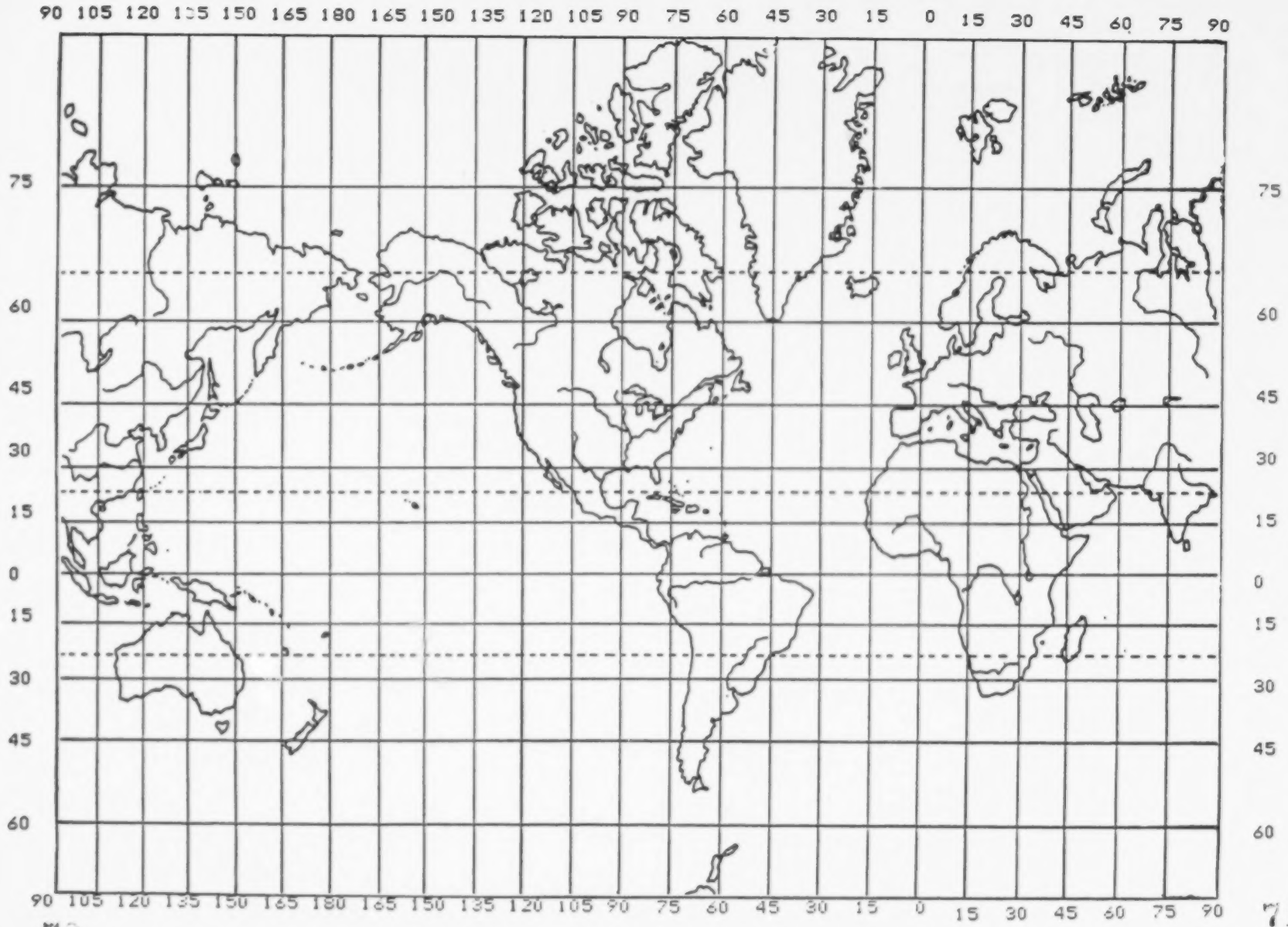
4. Symbolize and label the locations of: the Rocky Mountains in North America, the Andes Mountains of South America, the Alps of Europe, and the Ural Mountains of Russia.

5. Given the following degrees latitude and longitude, find out on which continent each of the following falls:

   a. 15 degrees north latitude and 15 degrees east longitude
   b. 50 degrees north latitude and 15 degrees east longitude
   c. 60 degrees north latitude and 105 degrees east longitude
   d. 15 degrees south latitude and 60 degrees west longitude
   e. 45 degrees north latitude and 90 degrees west longitude
   f. 30 degrees south latitude and 135 degrees east longitude
   g. 70 degrees south latitude and 65 degrees west longitude

Enrichment:

Play "Where in the World are We?" game. Give each student a copy of a world map that has lines of latitude and longitude. Teacher prepares beforehand on a card the degrees latitude and longitude of the location of at least 10 places on the map. Each location in degrees of latitude and longitude is on the front of the card with the name of the place on the back of the card. The class is then divided into two teams. The teacher then ask a student in the class to pick one of the ten cards. Both teams are shown the side of the card with the longitude and latitude at the same time. The first team captain to run up to the front the class to point to a wall map of the world at the correct place and name at that location wins five points. After the 10 cards are used, the team with the most points wins.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Topic 17: Land Forms And Bodies Of Water

Aim: What are the major land and water forms found on earth?

Performance Objectives: Students will be able to:

- define the following geographic terms: bay, cape, coastline, continent, delta, gulf, island, isthmus, lake, mountains, ocean, peninsula, river, sea and strait
- locate each land or water form on a map
- take notes based on reading selection

Materials:

- MS DOS computer lab
- software: Map Skills by NYC Board of Education
- copies of handout sheets: "Land and Water Forms Match challenge" and "Land and Water Forms crossword Puzzle"

Motivation:

Hand out individual copies of "Land and Water Forms Match Challenge"

Give students about five minutes to read and do matching column. Announce when the time limit is up. Ask: Which terms have you never seen before? Which terms were you not able to match? Which terms were the easiest to define? How would you go about finding these land and water forms on a map? Discuss the various responses, but do not offer the correct match answers.

Development:

1. Instruct students that the Map Skills program will teach the definitions and recognition of the geographic terms in the Match Challenge by presenting a reading selection, a diagram, and six multiple choice questions.

2. To start the program, insert DOS disk into disk drive A and turn on computer and monitor. When the screen asks for the date and time, press the ENTER key. When A> and a blinking cursor appear on the screen, type in BASICA and press ENTER. When the computer finishes loading BASICA, remove the DOS diskette and insert Map Skills diskette into disk drive A. Press the F3 key. The screen will display LOAD". Type in SSCAI and press ENTER. When the screen displays OK a second time, press the F2 key. After the first three screens are viewed, type either i or t and press ENTER. When the menu appears, students' names may be typed for a record of individual performance. Move cursor down to highlight module 7 "Bodies of Land and Water." Press ENTER and begin program.

3. Allow students 15 to 20 minutes to complete computer-directed activities and self-contained review.

4. Instruct students to use the definitions in the program to correct their matching columns and to put these sheets into their notebooks.

5. After module 7 is completed, instruct students to remove the disks from the machines, turn off the computer, monitor and power switches, and to put the diskettes into the protective covers.

Summary:

1. What is the difference between an ocean and a sea?
2. How is a peninsula different from an island?
3. Would you walk or take a boat across an isthmus? Explain why.
4. As you approach a land mass from the ocean, what land form will you see?
5. What is the difference between an island and a lake?
6. What is the name for a triangular piece of land located at a river's mouth?
7. How are a strait and an isthmus similar? Give an example of each.
8. Use an atlas to match each of the following with a specific land or water form:

Land Forms	Water Forms
Antarctica	South China
Cod	Nile
Florida	Bengal
Manhattan	Mexico
Rockies	Magellan

Homework:

Prepare individual copies of "Land and Water Forms Crossword Puzzle." Distribute to students. Instruct students to fill in crossword puzzle using the definitions as clues.

Enrichment:

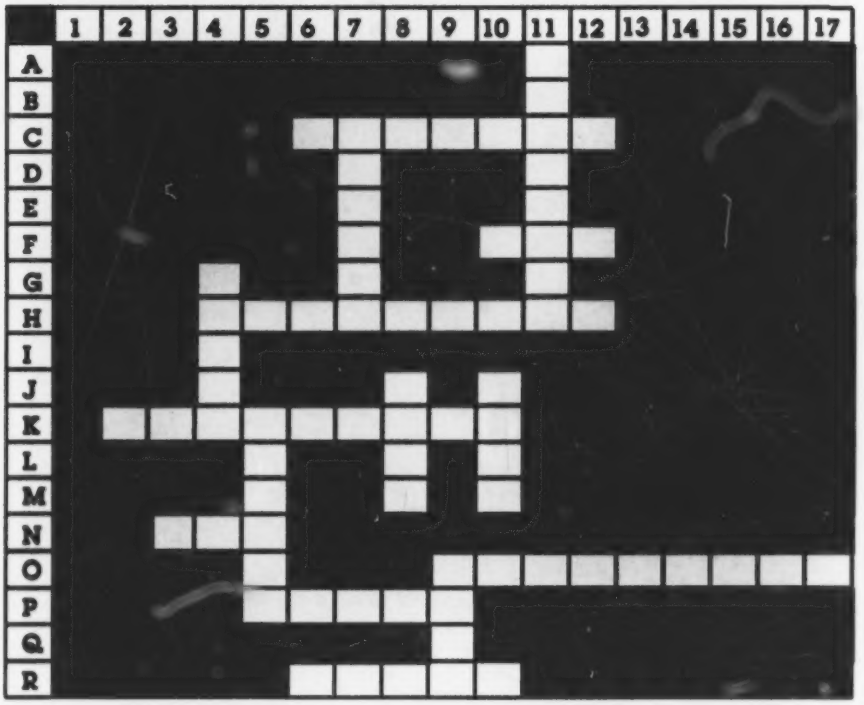
On a plain sheet of 8 1/2 x 1I paper draw an outline for an imaginary country and its surrounding geography. Include all 15 land and water forms you just learned on the map. Label by printing or use a color key.

Land And Water Forms Match Challenge

DIRECTIONS: Read the definition in column A. Then write in the letter of the term that best fits the description from column B.

COLUMN A		COLUMN B
1. _____	A small part of an ocean protected by land around it	A. Continents
2. _____	A body of land stretching out into the sea.	B. Island
3. _____	Land next to the ocean	C. Peninsula
4. _____	The largest land masses on earth	D. Mountains
5. _____	A wide land area where a river empties into a larger body of water.	E. Coastline
6. _____	A body of water nearly surrounded by land	F. Cape
7. _____	A body of land surrounded by water.	G. Isthmus
8. _____	A narrow body of land connecting two larger bodies of land.	H. Ocean
9. _____	A body of water surrounded by land.	I. Gulf
10. _____	Land that rises high above surrounding land.	J. Bay
11. _____	A very large body of water.	K. Strait
12. _____	A body of land with water on three sides	L. Sea
13. _____	A narrow body of flowing water within a land mass.	M. River
14. _____	A large body of water partly surrounded by land.	N. Delta
16. _____	A narrow body of water connecting two larger bodies of water.	O. Lake
		P. Archipelago
		Q. Valley

LAND AND WATER FORMS CROSSWORD PUZZLE



ACROSS

C6 Narrow body of land connecting two larger bodies of land.

F10 A small part of an ocean protected by land around it.

H4 One of the largest land masses on earth

K2 A body of land with water on 3 sides.

N3 A large body of water partly surrounded by land.

P5 A wide land area where a river empties into a larger body of water.

R6 A narrow body of flowing water within a land mass.

O9 Land next to the ocean.

DOWN

C7 Narrow body of water connecting two larger bodies of water.

G4 A very large body of water.

A11 Land that rises high above surrounding land

K5 Body of land surrounded by water.

J8 A body of water nearly surrounded by land

J10 Body of water surrounded by land.

O9 Body of land stretching out into the sea.

Topic 18: Land Forms

Aim: How can we portray land forms on a map?

Performance Objectives: Students will be able to:

- state the terms used to describe land forms
- locate dictionary definitions of the various land forms
- demonstrate differences among land forms
- classify types of land forms
- analyze the advantages/disadvantages of each land form for human life
- create a country with ideal land form distribution

Materials:

- Apple II computer lab
- software: Geography Keywords by Focus Media
- U.S.A. wall map
- rexographed list of Geography Keywords that deal with land forms (chosen from list found in booklet that accompanies software)
- class set of dictionaries

Vocabulary: plateau, peninsula, delta

Motivation:

Display a map of the U.S.A. Ask students:

If you had to travel from New York City to San Francisco, how would you use this to find your way there?

What obstacles might impede Your trip? (Elicit from students that there are geographical features not shown on this map that might hinder their trip. These include the following land forms: mountains, deserts, hills, plateaus, plains, peninsulas, islands, valleys, and deltas.)

Write these words on the board and have the students look up the definitions in dictionaries.

Development:

Ask the students:

1. How would living in or near a particular land form affect the way people meet their basic needs for food, shelter, clothing?

2. How could we represent these land forms on a map?

3. Tell the students that the program they are about to use will clarify their knowledge of land forms as shown on maps.

4. Students load the program. When the main menu appears, instruct them to press #1 (Land Forms).

5. The next frame instructs the students to make sure the CAPS LOCK key is pressed down. They now have a choice of pressing Y to hear music, or N for no sound. After Y or N is pressed, there is a choice of pressing I to get instructions, or G to go directly to the game. Tell the students to Press I and to keep following the directions.

6. If the students return to the main menu, they can continue the game by following the above directions again, and pressing G to go directly to the game.

Summary:

1. What is a peninsula?
2. How can we distinguish between a plain and a plateau?
3. Name three mountain ranges in the United States.
4. What advantages/disadvantages do you suppose each land form would have for human life?

Homework:

Pretend that you are about to take your friend on a mystery trip. Write your itinerary in terms of the land forms you'll encounter.

Enrichment:

Draw a chart that shows the major land forms and the parts of the world where they can be located.

Topic 19: Lesser Land Areas And Water Bodies

Aim: What are the smaller land areas and water bodies of the world?

Performance Objectives: Students will be able to:

- identify the location of the four oceans on a map
- locate on a map bodies of water smaller than an ocean such as: lakes, ponds, rivers, streams, seas, gulfs, and bays
- locate on a map land masses smaller than a continent such as: peninsulas and islands
- define such terms as: island, peninsula, lake, pond, river, sea, stream, sea, gulf, and bay

Vocabulary: island, peninsula, lake, pond, river, stream, sea, gulf, bay

Materials:

- Apple II computer lab
- software: Language of Maps - Series A - The Surface of the Earth by Focus Media
- map of North America, textbook map of the continent of North America
- homework worksheet: outline map of the continent of North America

Motivation:

Refer to a wall map of North America while students look at a map of North America in their textbooks. Review how colors and symbols have been used on maps. Then ask:

- Which continent is shown on the wall map?
- Which countries are located on this continent?
- What colors are used for the different countries?

Development:

1. Ask students to explain other features that can be found on the map of North America. Elicit that we live somewhere on this continent. Ask students to find the United States and to point to where we live in this country.

2. Recall that in previous lessons we studied large bodies of water called oceans. Explain that in this lesson we are going to be learning about smaller bodies of water. List the following words on the board and have students pronounce and define each correctly: lake, pond, river, sea, stream, gulf, and bay.

   Explain that the meanings of these words will be reviewed and explained in the glossary of terms in the program they will use. If they do not know the meaning of a word, they need only press G and the computer will show an alphabetical listing of the words and meanings.

   Have the students use their textbook map of North America to locate the places listed below. Ask individual students to locate these places on the board map and label them with numbers. Each place gets a different number.

   a. Lake Michigan, Lake Superior, Lake Huron, Lake Erie, and Lake Ontario between the United States and Canada.

b. Great Bear Lake and Great Slave Lake of Canada
c. Mississippi River, Ohio River, Missouri River, Colorado River of the United States
d. The Saint Lawrence River of North America
e. Caribbean Sea, Greenland Sea and Beaufort Sea
f. Gulf of Mexico, Gulf of Alaska and Gulf of Saint Lawrence
g. Hudson Bay of Canada, and Baffin Bay of Canada

Explain that streams and ponds are too small to show on this map. Other maps of smaller areas will show smaller lakes and streams.

3. Recall that in previous lessons we talked about large bodies of land called continents. Explain that in this lesson we are also going to be learning about smaller bodies of land. List the following words on the board and have students pronounce and define each: peninsula, island. The meanings of these words can also be found in the glossary of terms in the program.

4. Have the students use their textbook map of North America to find the places listed below. Ask individual students to locate these places on the map on the board and label them with a number. Each place gets a different number.

   a. The islands of Cuba, Puerto Rico, Haiti in the Caribbean Sea
   b. The island of Kodiak and the Aleutian Islands near Alaska
   c. The island of Newfoundland off the coast of Canada
   d. The peninsula that makes the state of Florida
   e. The peninsula off the coast of Mexico

5. Looking at the numbered map on the board, point to any number and ask a student what map term this number represents. Students must respond with the correct vocabulary term for the numbered item on the map.

6. Load Series A program disk #2 titled Land Areas and Water Bodies. The program is self starting after some questions are asked. Explain that in the program they are about to use, they will see similar vocabulary terms on a map of North America. The program will test for understanding of the terms listed above. Remind students to press the space bar to make the program move along and Return after choosing answers to questions asked by the program.

7. Allow 15-20 minutes for students to finish the program.

Summary:

1. Define these geographical terms: island, peninsula, lake, pond, river, stream, sea, gulf.
2. How is a peninsula different from a continent?
3. How is an island different from a continent?
4. How is a sea different from an ocean?
5. What is the difference between a bay and a gulf?

Homework:

Using the outline map of North America, have the students do the following:

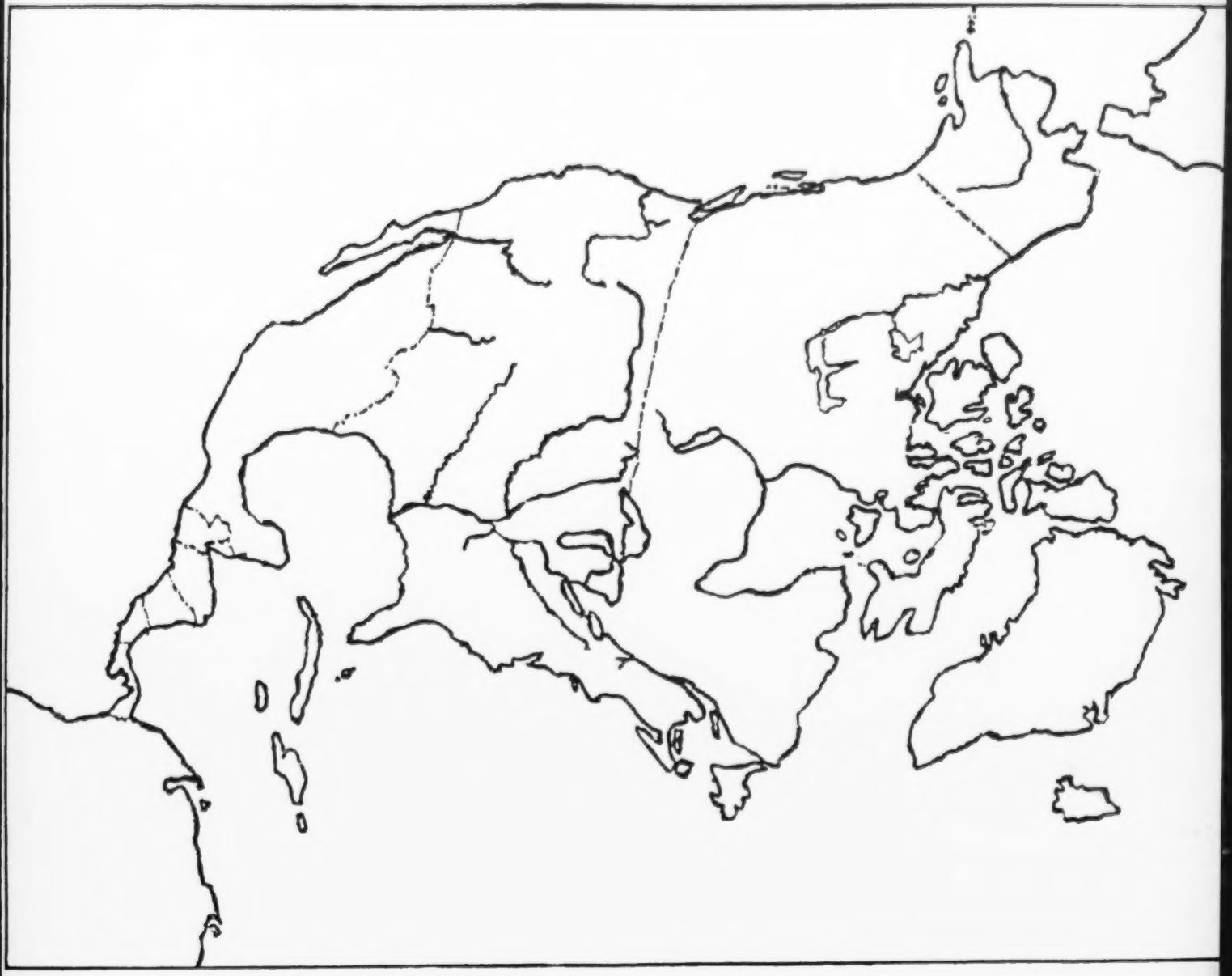
1. Choose your own color, then color and label the countries of Canada, The United States and Mexico.

2. Color in blue and label the oceans around the continent of North America - Atlantic, Pacific and Arctic Oceans.

3. Mark the outline map with these numbers at the locations of these places (use your textbook map:
   1 - Snake River on the west coast of the United States
   2 - The peninsula off the coast of Mexico
   3 - The Rio Grande River between Texas and Mexico
   4 - The peninsula for the state of Florida
   5 - The island of Cuba which is south of Florida
   6 - Vancouver Island on the west coast of Canada
   7 - Mackenzie River in northern Canada
   8 - The Great Lakes between the United States and Canada
   9 - The Gulf of Alaska
   10 - The Hudson Bay of central Canada
   11 - The Greenland Sea near Greenland
   12 - The Gulf of California near Mexico's west coast
   13 - The Gulf of Mexico
   14 - The Caribbean Sea near Cuba
   15 - Bay of Fundy near Nova Scotia Canada

Enrichment:

Play "Find it on the World Map" game. Divide the class into two teams. Place two world maps on the board. Each student gets a numbered index card. On the back of the numbered card is the name of a certain place on the map such as a river, lake, ocean, sea, gulf, bay, island, peninsula, or continent. After using the map in their books, students must find the place on the map on the board and mark, with a crayon, the number of their card at the correct location on the map. When all students have marked the map with their numbers, the teacher checks the numbers for the correct locations. Each correct match gets five points. The team with the most points wins.



Topic 20: The Continents And Oceans Of The World

Aim: How are the continents and oceans shown on a world map?

Performance Objective: Students will be able to:

- identify the continents and oceans by their shape, color and position on a world map
- identify different types of bodies of water

Materials:

- Apple IIe computer lab
- software: The Language of Maps - Series A - The Surface of the Earth, Disk I, Oceans and continents, by Focus Microcomputer Software
- large map of the world
- copies of a world map showing continents and oceans

Motivation:

Hang map of the world in the front of the classroom.

Can you find where we live on the map? What is the name of our country? What country is "below" the United States? What country is "above" the United States? The United States, Mexico and Canada form what continent? Show on map.

Development:

1. Draw a compass on the board and remind students that on a map we call "above," north of; "below," south of; "to the right of," east of; and "to the left of," west of.

2. "What color is used on the map to show water? The large bodies of water are oceans. What is the ocean to the east of North America? What is the ocean to the west of North America?" List names on board under the caption Oceans of the World. "The Atlantic Ocean and the Pacific Ocean are the two largest oceans. Can you find the other two smaller oceans? What are their names?" Add names to the list. "How many oceans are there?"

3. "As you said, we live on the continent of North America. What continent is to the south of North America?" Under the caption Continents of the World list North and South America. "Can you find other continents?" List the responses. "How many continents are there?"

4. Review with the students the correct procedures for handling disks, and turning on the computer and the monitor. Have students place disk I into drive A. The program is self loading

5. There is no menu. The program begins by demonstrating how continents and oceans are represented on world maps. The program then presents a series of simple activities that reinforce the students' knowledge of the shapes and names of the continents and oceans.

6. Students should be given approximately 15 minutes to complete the activities.

Summary:

1. What continent do we live on?
2. What continent is south of North America
3. What ocean is west of North America?
4. What continent is across the Atlantic ocean from North America?
5. What continent is South of Europe?
6. What ocean is to the east of Africa?
7. What continent is to the north of the Indian Ocean?
8. What ocean is to the east of Asia?
9. What continent is completely surrounded by the Pacific Ocean
10. What is the largest continent? What is the smallest continent?
11. How many continents are there? How many oceans are there?

Homework:

Prepare a rexographed map of the world showing only the continents and oceans. Label the continents and oceans.

1. Color the oceans blue.
2. Color each continent a different color
3. List the name of each continent. Underline each continent's name in the color you colored it on the map.
4. List the names of the continents in the order of their size, biggest first, smallest last.
5. List the names of the oceans in the order of their size.

Enrichment:

1. Keep a scrapbook of maps of the world and maps of the continents. Label the oceans and continents. A good place to look for maps is in travel advertisements.

2. Create your own map of the world cutting the continents from colorful scraps of paper or material.

3. Make your own "word find" using the names of the oceans and continents.

4. Create an imaginary trip around the world. Tell how you would get across each continent. Tell how you would get from one continent to another. You can use cars, planes, boats, trains, camels or skateboards. Better yet, use your own imagination to dream up great ways of traveling, but remember it's pretty hard to skateboard across an ocean.

Topic 21: Terrain

Aim: How can we show different terrains on a map?

Performance Objectives: Students will be able to:

- define terrain
- give examples of different terrains
- create a terrain map
- analyze the advantages/disadvantages of living near different terrain

Materials:

- Apple II computer lab
- software: Master Mapper: All Terrain Game by Imperial International
- N.Y. State wall map

Vocabulary: terrain, hike

Motivation:

Tell the students that they are about to go on a trip around N.Y. State. Their trip will include taking a long hike.

What would you try to avoid on this bike? Elicit: steep trails, rocky surfaces, mud, slippery areas. List suggestions on board.

How would you be able to tell which trails to avoid?

Tell the students that the name for these various land descriptions is terrain.

Development:

1. Display a New York State wall map.

   How does the map show different kinds of terrain?

   What symbols could we use to show these terrains. (List suggestions on chalkboard next to given examples of terrains.)

2. Tell the students that they are about to use an All Terrain Game program. It will place them in a situation in which, with the aid of given information, they will try to find the quickest route across a terrain map. They can use different kinds of transportation, and they have to consider how their speed will vary through the different terrains.

3. Students load the program. The first screen gives the directions. Instruct the students to press the space bar after the directions have been read.

4. A map will appear that includes the terrain, a scale, and a key. The students have to type in directions. If they lose the game, they have to press the space bar and start again when the directions screen appears. If they win the game, they are instructed to press the space bar to go to the next terrain map.

Summary:

1. What is a terrain map?
2. What information is included on a terrain map?
3. What questions may be answered by a terrain map?
4. What kinds of terrains are found in N.Y. State?
5. Is there a relationship between terrain and climate? Explain.

Homework:

Draw a terrain map of New York State. Include terrain symbols and a legend.

Enrichment:

What do you think would be the ideal place to live in? Draw a map of this place. Be sure to include what the terrain would be like.

Topic 22: Ocean Floor Mapping

Aim: How can We show the ocean floor on a map?

Performance Objectives: Students will be able to:

- identify the topographical features of the ocean floor
- graph a profile of the ocean floor
- make an ocean floor map
- analyze an ocean floor map

Materials:

- Apple II computer lab (An MS DOS version is also available.)
- software: Ocean Floor by Prentice-hall

Vocabulary: shelf, slope, magma, seamount, sedimentation, tablemount, trench echo-sounding

Motivation:

Ask the students to describe their experiences when going to the beach. Guide the discussion towards swimming experiences.

What happened as you walked further away from the shore?
How could we show this on a map?

Development:

1. Explain to the students that, just as there are maps to show land features, there are also maps to show ocean floor features.

2. Tell the students that the program they are about to use will show them how to map an ocean floor. To do this, they will first learn how to identify ocean floor features and how to graph a profile of the ocean floor.

3. Students load the program.

4. The first screen shows the Main Menu, where the students can choose Preview, Instruction, or Evaluation. Tell the students to press p to select Preview.

5. The preview menu will appear on the screen. The students can press #1: How to get help, #2: Meaning of Symbols, #3: Vocabulary and Glossary, #4: Science Skill, or #5 to go back to the Main Menu. Instruct the students to press #1.

6. The Help Menu will appear on the screen, which lists the various keys the students can use if they need help during the program. To go back to the Preview Menu, press P.

7. Tell the students to continue to select and preview numbers 2 through 5 until they return to the Main Menu.

8. When the students return to the Main Menu. Instruct them to press I to select Instruction.

9. The students should now work their way through the program by following the directions and choosing the appropriate numbers.

Summary:

1. How is echo-sounding used in ocean-floor mapping?
2. Describe the major features of the ocean floor.
3. How do trenches, seamounts, and tablemounts form?

Homework:

List the major topographical features of the ocean floor.
Compare/contrast the ocean floors of the Atlantic and Pacific oceans.

Enrichment:

Why does the earth's circumference remain unchanged if the ocean floor is always changing?

Topic 23: Physical Maps

Aim: How are physical features shown on a map?

Performance Objective: Students will be able to:

- distinguish a physical map from a political map
- identify the symbols for lakes, rivers, highlands and lowlands
- read a map key

Materials:

- Apple IIe computer lab
- software: The Language of Maps - Series A. The Surface of the Earth. Disk III
- political map of the United States

Motivation:

Hang the political map and the physical (topographical) map in front of the room. Ask: What is shown on map A (political map) that is not shown on map B (the physical map?) List the responses on the board under the caption Map A. What is shown on map B that is not shown on map A? List responses under the caption Map B. Were the rivers, lakes and mountains here when Columbus came to the new world? Were the cities and states here when Columbus discovered the new world? Maps that show man-made things are called political maps. Which map shows things that are man-made?" Cross out caption Map A and write Political Map. "Which map shows things that are made by nature? A map that shows natural features is called a physical map." Cross out caption Map B and write Physical Map.

Development:

1. "How are rivers shown on the physical map?" Have students point out major rivers on the map. "How are lakes shown on the map?" Have students point out major lakes on the map.

2. Ask students to point out an area on the map with mountains. How do you know they are mountains?

3. Have a student read the key on the physical map. "What does the key tell us?"

4. Have students insert disk 3 into drive A. The program is self-loading

5. The computer-directed instruction begins with descriptions of physical and political maps. There then follows a series of activities in utilizing the key on physical maps. Students will work at their own pace.

6. Allow students enough time to complete the activities. Fifteen minutes should be sufficient time for all students to complete the activities.

Summary:

Allow students to refer to the maps to answer the following questions:

1. What do we call maps that show man-made features?
2. What kind of map shows features made by nature?

3. Is a river man-made or made by nature? Explain.
4. What kind of map would show cities?
5. Point out an area with mountains.
6. Where on the map would you look to find out how high the mountains are?
7. Is Florida a mountainous state? Explain.
8. Point out an area of lowlands on the map.

Homework:

1. Create your own imaginary country. Give it a name.
2. Draw a map of your country.
3. Create your own symbols to show rivers, lakes, mountains and lowlands.
4. Make a key using your symbols.
5. Put the symbols on the map where you think the rivers, lakes, mountains and lowlands should go.

Enrichment:

1. Create a three-dimensional map showing physical features.

2. Draw a political map of your neighborhood. Use symbols to show playgrounds, schools, stores, libraries, subway stations, firehouses and any other man-made features you consider important.

3. Write an essay on how physical geography affects people's style of living and occupations.

Topic 24: Topographical Maps

Aim: How can we distinguish the highlands and lowlands on a map?

Performance Objectives: Students will be able to:

- identify a topographical map
- distinguish between political and physical maps
- explain what elevation means on a map
- state the altitude of land and the depth of water using a color key
- identify symbols to show elevation
- determine direction of river flow in relation to land elevation
- define such terms as: mountain, plateau, hill, plain, altitude, sea level, depth, elevation, highlands, lowlands, physical map, political map

Vocabulary: topography, physical map, political map, elevation, altitude, sea level, depth, slope, highland, lowland, mountain, plateau, hill, plain,

Materials:

- Apple II computer lab
- software: Language of Maps - Series B - Location and Distance by Focus Media
- copies of a road map, topographical wall map of North America,
- social studies textbook
- homework worksheet: outline map of an imaginary island

Motivation:

Refer to topographical wall map of North America and then to a road map. Elicit that both maps are different in certain ways.

Development:

1. Review with students the features to be found on the road map, e.g., direction, distance. Then develop the concept that the topographical map closely shows the earth as it really is on its surface. It is also called a physical map of the land. Develop the meanings of important words associated with such a map. From the list at the board, have students pronounce, define and apply these words: mountain, plateau, hill, plain, elevation, altitude, highlands, lowlands, sea level, river and lakes.

2. Explain that the road map shows part of the earth as it is vewed in its political state. This is called a political map of the land, because it represents man-made objects. Review the meanings these words associated with such a map: road, bridge, city, boundary, airport, and railroad.

   Advise students that these words will be explained also in the glossary of terms in the program they will use. If they do not know the meaning of a word, they just press G and the computer will show an alphabetical listing of the words and meanings.

3. Returning to the topographical map ask students what the legend of colors means for this map. Elicit that such a legend shows the elevation or altitude of the land from sea level. Explain that sea level is the starting pdint for measuring how high something is. Sea level is "zero"

feet. Everything else is else is measured as a given height above sea level. Mountains are above sea level.

Explain that depth is how deep water is below sea level; when we refer to below sea level we talk about depth.

4. Ask students to finds the answers to these question by looking at the topographical wall map on the board.

    1. What color is used to show the highest mountains?
    2. How high are the highest mountains?
    3. What color is used to show the plateaus?
    4. What color shows the plains on this map?
    5. How high are the Plains above sea level?
    6. What color shows the coastal lowlands on this map?
    7. How high above sea level are the coastal lowlands on this map?
    8. In which mountains does the Missouri River start?
    9. Where does the Missouri River end its journey?

5. Load Series A, Program disk #3 titled Highlands and Lowlands. The program is self starting after some questions are asked. Explain that in the program they are about to use, students will see similar examples of the above concepts. The program will explain and test for understanding of the concepts about physical and political maps and for highlands and lowlands. Remind students to press the space bar to make the program move along and Return after choosing answers to questions asked by the program.

6. Allow 15-20 minutes for students to finish the program.

Summary:

1. Define these terms: topography, physical map, political map, mountain, plateau, hill, plain, highland, lowland, sea level, altitude, elevation, depth, and slope.
2. How is a physical map different from a political map?
3. How is color used to show the elevation of the land or the depth of water?
4. On a map what is considered highlands?
5. What is considered lowlands on a map?
6. Where does all measurement of altitude and depth start?

Homework:

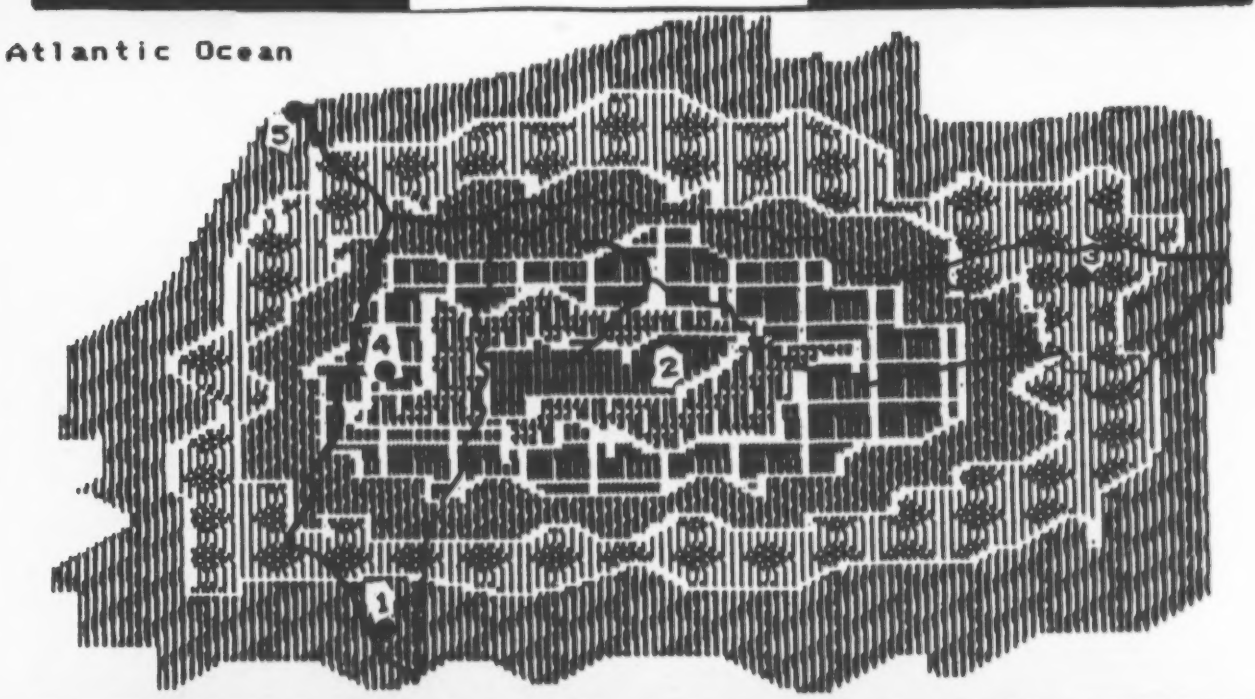
Using the outline of an imaginary island, have the students do the following:

1. Color in red the land that is 10000 feet above sea level.
2. Color in blue the land that is between 5000 and 10000 feet.
3. Color in orange the land that is between 3000 and 5000 feet.
4. Color in green the land that is between 1000 and 3000 feet.
5. Color in yellow the land that is between 100 and 1000 feet.
6. Color in purple the land that is from 0 to 100 feet above sea level.
7. Which city is located in the highlands?
8. Name three cities located in the lowlands.
9. Name a city near sea level.
10. Which directions do the rivers flow on this island?
11. Where does the river end its journey?

Enrichment:

Create a topographical map of a park or some sloping land in your neighborhood. Be sure to use a color key to show various elevations. You may use the level of one street as the reference point for all measurements instead of sea level. It is alright to estimate elevations.

ISLAND OF NOWHERE



ABOVE 10000 FEET

BETWEEN 5000 AND 10000 FEET

BETWEEN 3000 AND 5000 FEET

BETWEEN 1000 AND 3000 FEET

BETWEEN 100 AND 1000 FEET

BETWEEN 0 AND 100 FEET

ELEVATION

CITIES ●

1. GYPSY
2. HOPEVILLE
3. SLY
4. GOODIE
5. TOOTSIE

NORTH

WEST — EAST

SOUTH

Topic 25: Climate

Aim: How can maps help us to determine climates?

Performance Objectives: Students will be able to:

- state the definitions of weather and climate
- make a chart showing climatic regions
- state what information a climatic map shows
- analyze and interpret climatic data
- list problems which climatic maps are designed to solve

Materials:

- Apple II computer lab
- software: Geography Keyword by Focus Media
- rexographed list of Geography Keywords that deal with climate (chosen from list found in booklet that accompanies software)

Motivation:

Tell the students to make believe they are going on a vacation.

Where would you like to go? (List suggestions on the board, and help the students analyze their suggestions as to type of climate chosen and what activities and clothing would be appropriate.)

Development:

1. Ask the students:
   What is the difference between weather and climate? (Elicit the response that weather is the short-term condition of the atmosphere; climate is the average weather over a long period of time.)

   Describe the climate where you live.

   Have you traveled anywhere else? Describe that climate.

2. Using a world map, students locate the continents, the equator, the prime meridian, and lines of latitude and longitude.

   How do you think latitude and longitude affect climate?
   Are winters always in January? Explain.

3. Tell the students that the program they are about to use will help them to understand more about climate.

4. Students load the program. When the main menu appears, instruct them to press #6 (Climate)

5. The next frame instructs the students to make sure the CAPS LOCK key is pressed down. They now have a choice of pressing Y to hear music, or N for no sound. After Y or N is pressed, there is a choice of pressing I to get instructions, or G to go directly to the game. Tell the students to press I and to keep following the directions.

6. If the students return to the main menu, they can continue the game by following the above directions again, and pressing G to go directly to the game.

Summary:

1. What is a climatic map?
2. What information is found on a climatic map?
3. Which questions may be answered by a climatic map?
4. What kind of climate is in the Northeast, where New York is located?
5. Do you think there is a relationship between climate and population density? Explain.
3. What else would climate affect? (occupation, clothing, food, shelter)

Homework:

Look at a climatic world map. Write down all the countries through which the equator passes. What similarities exist? What limitations are placed on these countries as a result of their location?

Enrichment:

Although many factors contribute to a region's climate, one of the most important factors is latitude. Make a chart that shows the different climatic regions.

Topic 26: Weather Maps

Aim: How can we show weather on a map?

Performance Objectives: Students will be able to:

- define weather
- make a weather map
- use weather symbols on a map
- state what information is gotten from a weather map
- analyze and interpret weather data
- observe how fronts cause weather changes
- analyze a weather map to plan events and choose clothes based on weather information
- compare weather maps and forecast weather
- make a weather poster

Materials:

- Apple II computer lab
- software: Weather Forecasting, by Prentice-Hall
- newspaper weather map

Vocabulary: precipitation, air mass, forecast, isobar, isotherm, cold/warm front, occluded front, low

Motivation:

Display a newspaper weather map. Elicit from the students who might use such maps. (farmers, fishermen, picnickers) Can we forecast the weather through the use of maps? Explain.

Development:

1. Tell the students that the program they are about to use will take them through the steps necessary to learn how to read a weather map and forecast weather.

2. Students load the program.

3. The first screen shows the Main Menu, where the students can choose Preview, Instruction, or Evaluation. Tell the students to Press P to select Preview.

4. The preview menu will appear on the screen. The students can press #1: How to get help, #2: Meaning of symbols, #3: Vocabulary and glossary, #4: Sscience skill, or #5 to go back to the Main Menu. Instruct the students to press #1.

5. The Help Menu will appear on the screen, which lists the various keys the students can use if they need help during the program. To go back to the Preview Menu press P.

6. Tell the students to continue to select and preview numbers 2 through 5 until they return to the Main Menu.

7. When the students return to the Main Menu, instruct them to press 1 to select Instruction.

8. The students should now work their way through the program by following the directions and choosing the appropriate numbers.

Summary:

1. What does the word weather mean?
2. What is the difference between a warm front and a cold front?
3. What symbols are used on weather maps? What do they represent?
4. How are weather maps used to forecast weather?

Homework:

Use a library newspaper file to look up the weather predictions in New York City for a one-month period. Compare each day's forecast with the actual weather that occurred. How accurate were the forecasts?

Enrichment:

1. Cut weather maps out of a newspaper for a period of 2 weeks. Use them to make a poster. Include a record of the temperatures, sky conditions, type of clouds, amount of rain, and wind direction and speed. Explain what the weather map symbols mean.

2. Make a chart of weather map symbols and their meanings.

Topic 27: Population Maps

Aim: How can maps help us to understand population patterns?

Performance Objectives: Students will be able to:

- identify what information is presented on a population map
- compareareas of population
- explain the factors that affect population growth
- create a population map

Materials:

- Apple II computer lab
- software: World Geography Explorer Series: Eastern United States by Mindscape Inc.
- paper to keep an explorer's log
- U.S. population wall map

Vocabulary: density

Motivation:

Ask the students to discuss the drawbacks to living in New York City. List suggestions on chalkboard. Elicit "overcrowding" as one of the responses.

Development:

1. Ask the students: If you wanted to move to a less populated area, how could you tell which areas would be good choices?

2. Display a population wall map of the United States. Have the students identify regions of low/high population density.

   Which areas might gain/lose population in the future? Explain.
   Why is California experiencing such a fast population growth?
   Elicit relationship between living conditions, natural resources and population density.

3. Tell students that the program they are about to use will help them to explore areas in the Eastern United States to learn about population, climate, and occupations. They will be taken to a state without knowing where they are going. They have to figure out where they are by exploring clues and "talking" to the people. They will record their findings in a log.

4. Students load the program, pressing the space bar until the Main Menu appears. Instruct the students to Press #1 (Read the Instructions), then press Return, and continue following the instructions.

5. The students have to type commands to search for clues and to go from place to place. A list of the commands appears on page 16 in the manual that accompanies the software.

2. Land
   2.1 Mountain Ranges
   2.2 Plateaus
   2.3 Plains
   2.4 Lowlands

3. Write a report on how the physical geography of Europe affected the development of nations.

Topic 28: Compass Headings; Calculating Distances On Water

Aim: How can we find our direction and distance to reach land safely when a hurricane is approaching?
How can we calculate the time it will take us to reach land?

Performance Objectives: Students will be able to:

- explain how to set a heading using a compass rose
- measure distance using a scale
- calculate nautical distance traveled when speed in knots and time in hours is known

Vocabulary: hurricane, heading, speed, time, distance, knot, nautical mile, compass rose

Materials:

- Apple II computer lab
- software: Voyage of the Mimi - Maps and Navigation by Holt, Rinehart, and Winston, Publishers
- navigation chart
- handout: map grid

Motivation:

Refer to the navigation chart and remind students that through our prior reading and classwork we have been able to rescue stranded ships once the latitude and longitude are known. Lead the discussion to these questions.

- What would you do if you were in a boat somewhere on this navigation chart and your radio said a hurricane is due to arrive in a couple of hours?
- What information would one need to get to land safely before the hurricane arrives?

Development:

1. Elicit that the first piece of information we need is where the nearest land is located. Distribute a copy of the handout to each of the students. On the chalkboard draw a replica of the handout and demonstrate the following:

1.1 Explain that we know where we are located on water. We know our latitude and longitude. The "X" on the map marks the location of the ship. The island is located on the right side of the grid. Our ship must be aimed at the nearest land. We must point the ship in the direction of the land. Ask students how they would know in which directions to point a boat, if the land can't be seen.

Explain that to set the heading of the boat we must draw a line from the boat to the land. Then that line must be moved parallel and through the middle of the compass rose. The number on the compass rose facing the direction of the land is the heading. Turn the ship to that compass heading and stay on that compass number and eventually you will reach the land.

1.2 Once we know the heading, we must know how far away we are from land. On the handout is a scale. Every mark on the scale is ten nautical miles. There are 60 nautical miles on the scale. Reproduce the scale on the edge of a piece or paper. Using the piece of paper, place the zero of the scale on the "X" and aim the edge of the paper toward the land. Mark off on the map where 60 nautical miles is located. Move the paper scale and measure again until the total distance is known from the boat to the land.

1.3 Explain that speed is how fast the boat can go. If a boat goes one knot, it travels one nautical mile in an hour. If a boat goes five knots, it travels five nautical miles in an hour. Consequently, a boat going 20 knots goes 20 nautical miles an hour. In the equation "Speed x Time = Distance," we can figure out how far we go if we know the speed and time the boat travels. Suppose that the speed is 30 knots and the time is four hours. When the distance the boat travels is determined by the following:

Speed	x	Time	=	Distance
30 knots	x	4 hrs.	=	120 nautical miles

We must use this equation to determine if we arrive at the land safely before the hurricane arrives.

2. Tell the students that they must make the decision of how fast to go and for how many hours. If they make the correct choices, then they reach land safely. If they don't make the right choices, then their boat sinks. Based on the handout given, have the students fill in the blanks to each of these questions and then calculate whether they will reach the land before the hurricane arrives. In most cases they must calculate the distance twice. First they travel a certain distance then determine how much farther they must go to reach the land. A second calculation is then made.

a. Boat X
Heading to land is _____ degrees
Our boat is _____ nautical miles away from land.
Hurricane will arrive in 8 hours.
Speed you can use (choose one): 5 knots 10 knots 20 knots
Hours you can use (choose one): 1 hour 2 hours 3 hours 4 hours

Calculate: Speed x Time = Distance

The first distance traveled was _____ nautical miles.
The second distance traveled was _____ nautical miles.
The total distance traveled was _____ nautical miles.

b. Boat Y
Heading to land is _____ degrees
Our boat is _____ nautical miles away from land.
Hurricane will arrive in 6 hours.
Speed you can use (choose one): 5 knots 10 knots 20 knots
Hours you can use (choose one): 1 hour 2 hours 3 hours 4 hours

Calculate: Speed x Time = Distance

The first distance traveled was _____ nautical miles.
The second distance traveled was _____ nautical miles.
The total distance traveled was _____ nautical miles.

Continue with other examples until students master the process.

3. Tell the students that the program they are about to use will explain the above ideas more fully. If they want more help, then at the beginning of the program when they see "Do you want directions? (Y/N)," press Y for yes and then Return. The program will present "1 - Set your boat's heading" and "2 - Measure distance to the island." Choose the number of the one you want and press Return. The program will explain, using computer graphics, how to do it with other detailed examples.

4. Load disk #1 side B - This side is titled "Hurricane." The program is self-starting. When the students see the question: Do you want directions? (Y/N), press N and then press Return. The hurricane game starts. This program will introduce concepts similar to those developed above. The challenge is to reach land safely before the hurricane arrives.

5. Allow 10-15 minutes for students to finish the program.

Summary:

1. Define these words: hurricane, heading, speed, time, distance, knot, nautical mile, compass rose.
2. How do you determine the heading of your ship?
3. How do you measure distance on water?
4. Explain this equation "Speed x Time = Distance."

Homework:

Using the copy of the handout at the end of this lesson plan, have the students answer these questions:

1. Ship #1

Heading to land is _____ degrees
Our boat is _____ nautical miles away from land.
Hurricane will arrive in 8 hours.
Speed you can use (choose one): 5 knots 10 knots 20 knots
Hours you can use (choose one): 1 hour 2 hours 3 hours 4 hours

Calculate: Speed x Time = Distance

The first distance traveled was _____ nautical miles.
The second distance traveled was _____ nautical miles.
The total distance traveled was _____ nautical miles.

2. Ship #2

Heading to land is _____ degrees
Our boat is _____ nautical miles away from land.
Hurricane will arrive in 6 hours.
Speed you can use (choose one): 5 knots 10 knots 20 knots
Hours you can use (choose one): 1 hour 2 hours 3 hours 4 hours

Calculate: Speed x Time = Distance

The first distance traveled was _____ nautical miles.
The second distance traveled was _____ nautical miles.
The total distance traveled was _____ nautical miles.

3. Ship #3
Heading to land is _____ degrees
Our boat is _____ nautical miles away from land.
Hurricane will arrive in 8 hours.
Speed you can use (choose one): 5 knots 10 knots 20 knots
Hours you can use (choose one): 1 hour 2 hours 3 hours 4 hours

Calculate: Speed x Time = Distance

The first distance traveled was _____ nautical miles.
The second distance traveled was _____ nautical miles.
The total distance traveled was _____ nautical miles.

4. Ship #4
Heading to land is _____ degrees
Our boat is _____ nautical miles away from land.
Hurricane will arrive in 6 hours.
Speed you can use (choose one): 5 knots 10 knots 20 knots
Hours you can use (choose one): 1 hour 2 hours 3 hours 4 hours

Calculate: Speed x Time = Distance

The first distance traveled was _____ nautical miles.
The second distance traveled was _____ nautical miles.
The total distance traveled was _____ nautical miles.

5. Ship #5
Heading to land is _____ degrees
Our boat is _____ nautical miles away from land.
Hurricane will arrive in 6 hours.
Speed you can use (choose one): 5 knots 10 knots 20 knots
Hours you can use (choose one): 1 hour 2 hours 3 hours 4 hours

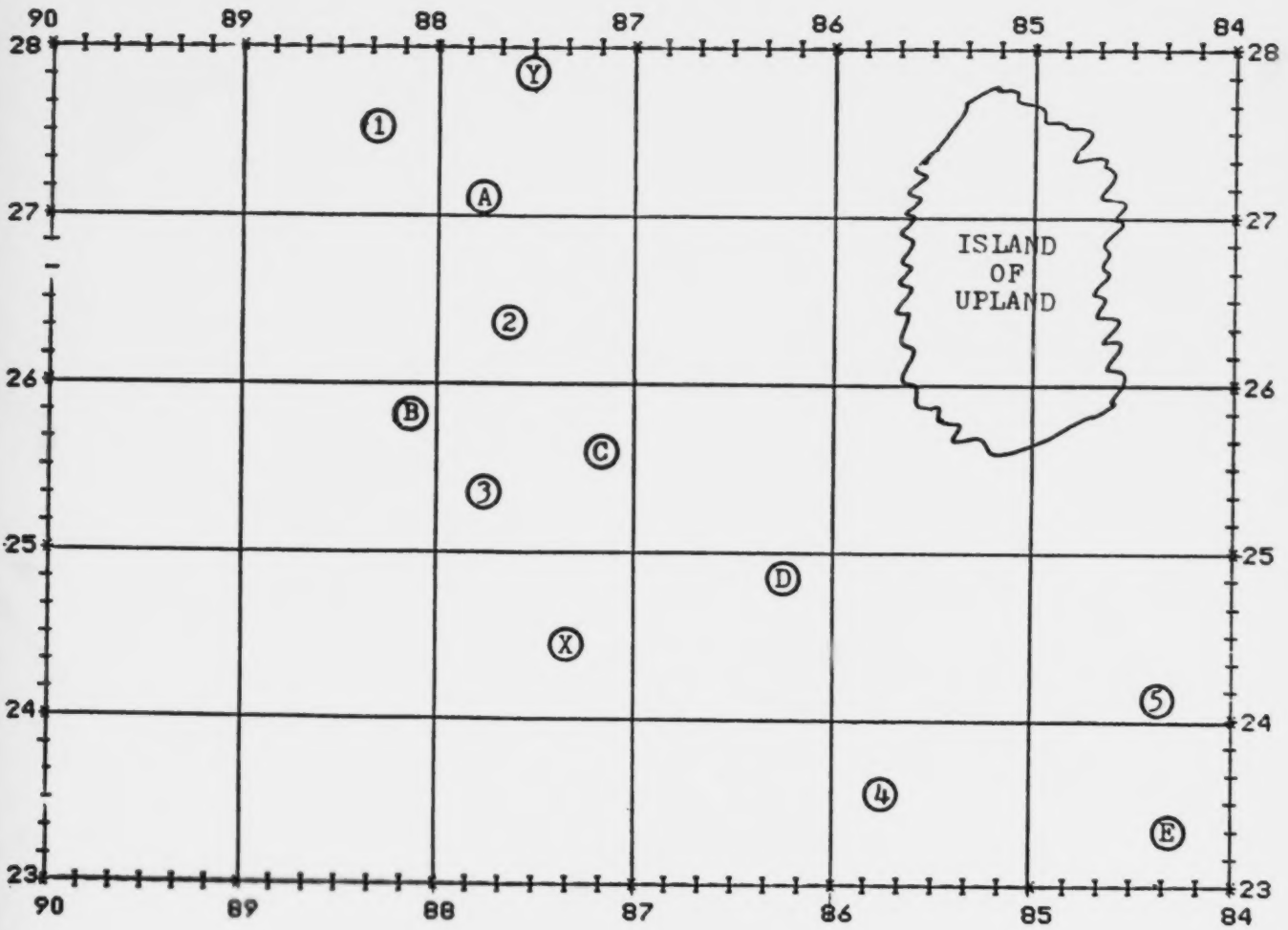
Calculate: Speed x Time = Distance

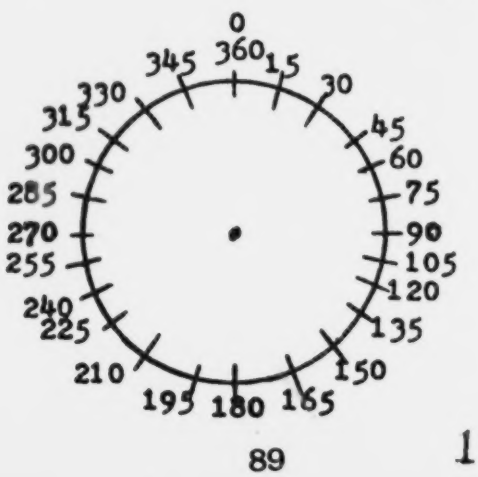
The first distance traveled was _____ nautical miles.
The second distance traveled was _____ nautical miles.
The total distance traveled was _____ nautical miles.

Enrichment:

Using the grid, make up a game for the class in which your "Rescue Ship X" must reach the other ships (numbers and letters) in distress. You state the heading from "X" and your classmates must determine the ship you will rescue. The location of "X" will change after each rescue.

Map Grid





MAP SCALE

0 60

Topic 29: Locating Places on Water - Triangulation

Aim: Can you rescue a stranded boat in water during heavy fog?

Performance Objectives: Students will be able to:

- explain how a radio directional finder works
- explain how to plot radio signals from shoreline beacons on a compass rose
- triangulate a position on a navigation chart
- located in degrees and minutes a position of latitude and longitude

Vocabulary: radio directional finder, radio beacon, compass rose, triangulate, navigation chart, degrees, minutes, latitude, longitude

Materials:

- Apple II computer lab
- software: Voyage of the Mimi - Maps and Navigation by Holt, Rinehart and Winston
- world map
- handout: map grid

Motivation:

Referring to the wall map of the world, remind the class that we have used lines of latitude and longitude in locating places on land. We have found where continents, states and cities have been located. Lead discussion to these questions:
What would you do if you were stranded on water in heavy fog and you couldn't see land?
What information would you need to get help to your boat?

Development:

1. Explain that the world is a big place and these lines make it easier to locate any place on the map, even a stranded ship on water. If a captain of a ship can't see land because of heavy fog or distance and the ship is dead in the water, rescue can be achieved by using a radio directional finder. Give each student a copy of the handout and create a chalkboard example of the map. Demonstrate on the board the following ideas, using a yardstick while students use their rulers.

1.1 Explain that on land near the coastline are radio beacons that send out radio signals. Each radio beacon sends out its own unique radio signal that can't be confused with another radio beacon signal. On board the ship is a Radio Directional Finder which is connected to a rotating antenna. This antenna picks up the radio signals and tells from where the beacon signals are coming.

1.2 To work the Radio Directional Finder you rotate the antenna until you get the weakest signal. That means the antenna is pointing directly to a radio beacon signal from shore. This machine then gives the compass direction to that radio beacon. You then draw a line through the compass rose on the navigation chart using that compass direction. Repeat this process using a second radio beacon and we end up with two lines going through the center of the compass rose on the navigation chart.

1.3 Triangulation involves moving those two lines from the compass rose to the radio beacon symbols where they come on the navigation chart. To do this, take the first line, and using a ruler, move it up until it is parallel to the radio beacon symbol on the chart from where it came. Then draw a line on the navigation chart through the beacon it came from out over the water. Do the same thing for the second line going through the compass rose and the second beacon. Where both lines cross one another is the location of the stranded ship. Just read off the latitude and longitude in degrees and minutes where those lines cross and your ship will be rescued.

2. Have the students find the location of a stranded ship given the following information:

   a. radio beacon #1 gives RDF reading of 28 degrees and 101 degrees
      radio beacon #3 gives RDF reading of 315 degrees and 135 degrees
      At what latitude and longitude do the lines cross?
   b. radio beacon #2 gives RDF reading of 225 degrees and 45 degrees
      radio beacon #3 gives RDF reading of 330 degrees and 150 degrees
      At what latitude and longitude do the lines cross?
   c. radio beacon #1 gives RDF reading of 270 degrees and 90 degrees
      radio beacon #2 gives RDF reading of 230 degrees and 50 degrees
      At what latitude and longitude do the lines cross?

   Continue with other examples until students master it.

3. Tell the students that the program they are about to use will help them to understand how to locate places. If they want additional explanation, then in the beginning of the program, when they see "Do you want directions? (Y/N)," press Y for yes and then Return. The program will present other detailed examples of the above ideas using computer graphics.

4. Load disk #1 side A. Choose #2, "Lost at Sea." The program is self starting. When the students see the question, "Do you want directions? (Y/N)," press N and then press Return. The rescue mission game starts. This program will introduce concepts similar to what was developed above and challenge students to locate the position of the stranded boat.

5. Allow 10-15 minutes for students to finish the program.

Summary:

1. What information does a Radio Directional Finder give?
2. What do shoreline beacons transmit to ships at sea?
3. Why do we use the weakest signal for the Radio Directional Finder?
4. How do we triangulate a position on a navigation chart?
5. After all the above is done, how do we know where the stranded ship is located on the navigation chart?

Homework:

Using the handout grid, have the students give the location of these stranded ships so the Coast Guard can send help.

Ship 1. Beacon #1 - 287 degrees and 107 degrees
Beacon #2 - 248 degrees and 68 degrees
What are the latitude and longitude of the stranded ship?

Ship 2. Beacon #1 - 281 degrees and 101 degrees
Beacon #3 - 360 degrees and 180 degrees
What are the latitude and longitude of the stranded ship?

Ship 3. Beacon #2 - 270 degrees and 90 degrees
Beacon #3 - 315 degrees and 135 degrees
What are the latitude and longitude of the stranded ship?

Ship 4. Beacon #1 - 260 degrees and 40 degrees
Beacon #2 - 225 degrees and 45 degrees
What are the latitude and longitude of the stranded ship?

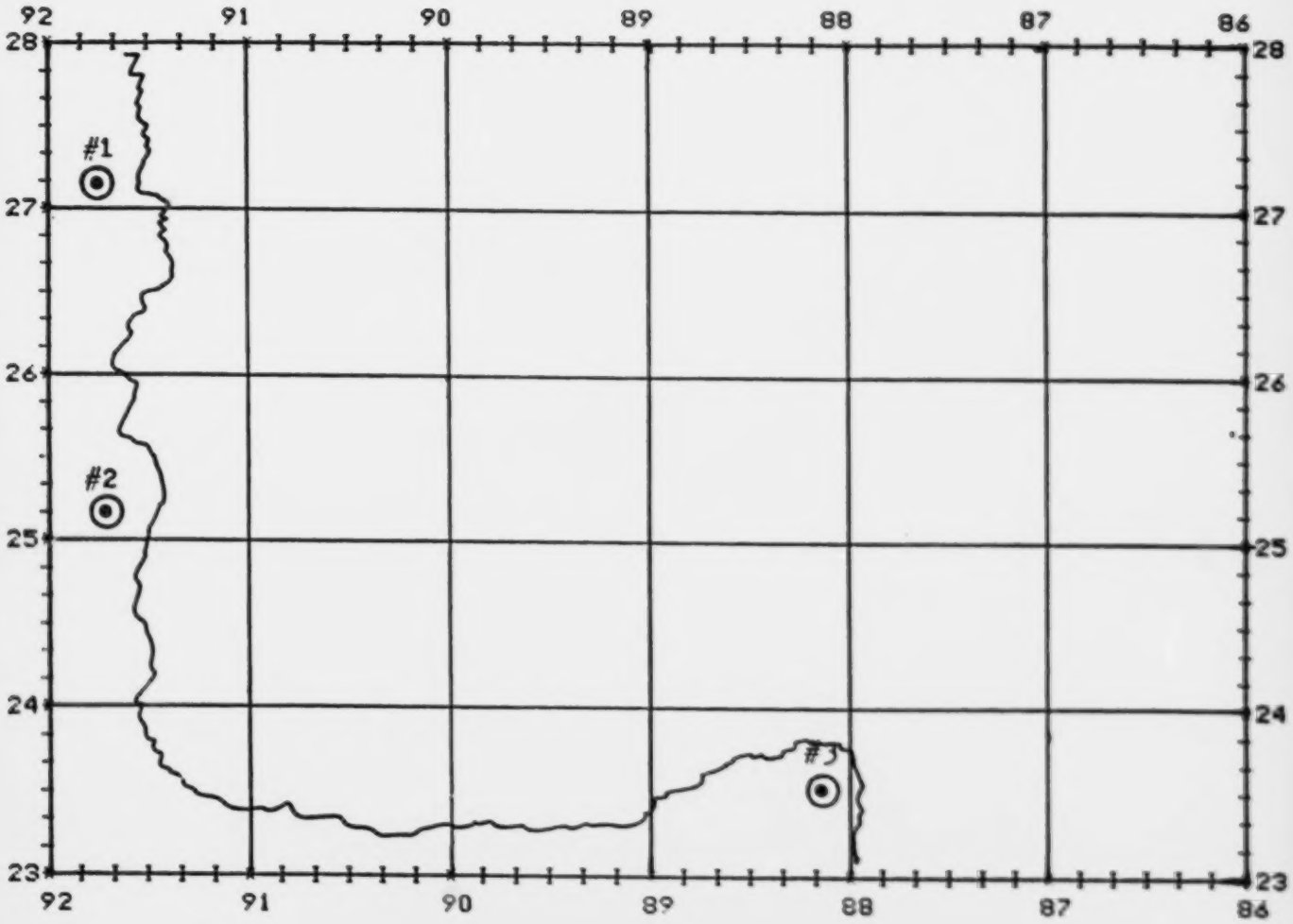
Ship 5. Beacon #2 - 245 degrees and 55 degrees
Beacon #3 - 315 degrees and 135 degrees
What are the latitude and longitude of the stranded ship?

Enrichment:

Research and:

1. Write a report on navigational aids that ships at sea use.
2. Interview an experienced air or sea pilot on the subject of experiences using "blind" navigation.

Map Grid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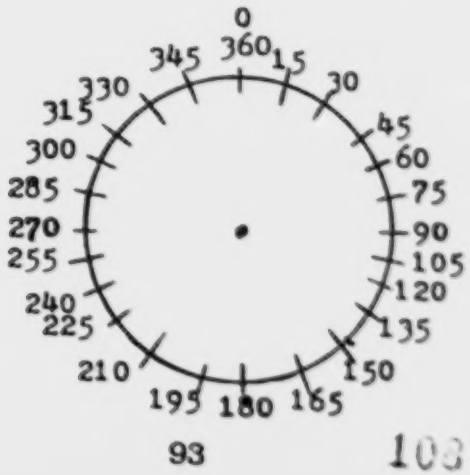
#1
#2
#3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345

103

GEOGRAPHY

Topic 30: Geography Of Europe

Aim: How can we use a map to answer general geography questions on the continent of Europe?

Performance Objectives: Students will be able to:

- read a map of the continent of Europe
- use compass directionals to locate the names of countries on the map
- find the names of capitals and major cities of countries on the map
- locate important industrial centers and port cities
- locate names for rivers, mountain ranges, plateaus, plains, and lowlands in countries on the map
- locate islands, seas, oceans, gulfs, straits, lakes, bays,

Vocabulary: geography, physical features, mountains, rivers, cities, capitals, country, mountain range, plateau, plains, lowland, island, sea, ocean, gulf, strait, bay, directional, northeast, southeast, southwest, northwest, atlas, fjord, border, boundary

Materials:

- Apple II computer lab (there is also an MS DOS version available)
- software: World Geography Adventure II: Europe by Intellectual Software
- chalkboard map of Europe
- student copies of a detailed map of Europe
- copies of an atlas

Motivation:

Referring to wall map of the continent of Europe, ask students to name as many countries of Europe as they are able to and to state some of the important things they have learned about each one mentioned.

Development:

1. Ask students to come up to the map to locate the countries mentioned and to state some facts about each country that the map reveals.

2. Advise to the students that they will be given a program that deals with the geography of Europe. Distribute student copies of a map of Europe and any atlases. State that they are to visit every country in Europe.

3. Explain to the students that the study of each country includes reading a question and picking out the correct answer when given multiple choices. They may refer to their copies of the map to find the answers, use copies of the atlas, or look at textbook maps. Questions will be asked about each country in Europe. Points are scored for each correct answer. The program tells the students their scores after the last question for each country visited. Only the highest scores are entered into the Hall of Fame at the end of the program. Students are to try to get their names in the Hall of Fame. Stress that repeated playing of the game improves scores.

4. Explain that when they are not sure of an answer they can press H for hint. If they get the answer correct after a hint, they only get half the value for that question. (If H is pressed on a 50-point question, and then the answer is correct, the program would give only 25 points.) Use hints sparingly. Wrong answers receive zero points.

5. Ask a student to tell where Shannon Airport is located in Europe. Point to its location on the chalkboard map. Pointing to the map, say that your trip through Europe starts here, in Ireland.

6. Explain that they will not have enough time to finish this program in one sitting. However, they can save the scores on the disk to pick up where they left off the next time they come to the computer lab. At the end of today's session, to save the scores press the Control key and then the Q key. Pressing Control and Q after any question that is being asked starts the saving scores sequence. When a player attempts to quit the words "DO YOU WISH TO QUIT NOW?" appears on the screen. The student must type Y or N to the question. If Y is pressed the question, "DO YOU WANT TO CONTINUE THIS GAME LATER?" appears. If the student answers Y, then the student must place disk #1 in the disk drive when "SAVE YOUR SCORES appears and press Return. The computer then prints the message "SAVING SCORES" and follows it with "HOPE YOU HAD A NICE GAME. SEE YOU AROUND." After a continuous graphics display fills the screen, then the program can be turned off.

7. Load the program. The program is self starting. When the program asks for the students's name, type in only the last name and press Return. When the computer asks "1) Continuing a Game or 2) Starting a new game?." Choose 1 to start an old game where it was left off or 2 to begin a new game.

8. Allow three class periods for the introduction and work by students to complete the program.

Summary:

1. After looking at the atlas and map, how did you know that you were in a country other than the U.S.?
2. How did you know how to tell which cities were capitals of countries?
3. How did a map show that some larger cities were more important than other smaller cities?
4. What symbols or colons were used to show lowlands, plains, and mountains in the map?
5. How were rivers depicted on the map?
6. If you had to look for a gulf, strait, sea, or bay, what color would you look for on the map?
7. Which countries are not connected by land to other European countries, but are still part of Europe?

Homework:

Draw a political map of the continent of Europe, and using colors and labels, show all its countries and their capitals.

Enrichment:

Draw a physical map of Europe and, using symbols, colors and labels, show the following:

1. Water
   1.1 Surrounding oceans and seas
   1.2 Straits
   1.3 Major rivers and lakes
   1.6 Gulfs
   1.7 Bays

2. Land
   2.1 Mountain Ranges
   2.2 Plateaus
   2.3 Plains
   2.4 Lowlands

Topic 31: London (A Mystery Game)

Aim: What are London's interesting sites?

Performance Objectives: Students will be able to:

- analyze subtle clues to find solutions to a puzzle
- cite commonly used British expressions
- simulate a trip through London

Do Now:

When you think about the city of London, what comes to your mind?

Materials:

- Apple II computer lab (An MS DOS version is also available.)
- software: Ticket to London by Blue Lion Software Corp.
- worksheet entitled Looking for Dr. X
- student notebooks or folders

Motivation:

London is one of the most interesting cities in the world. Today we are going to tour London and try to find out the name of a mystery person.

Development:

1. We are going to use the computer to assist us on our tour. Our primary goal is to find out the name of the mystery person. The person may be either living or dead. The person is (or was) British.

2. Load the disk into the computer. Type your name in an open box. Select either Man or Woman. Select No sound. When you are prompted to do so, turn the disk over to the other side and then press any key. You have arrived at Victoria Station. The person who greets you will tell you that in order to get your return ticket you must find the mystery person. You must first find the hotel that you are staying in. The program consists of screens containing a picture and two dialog boxes at the top of the screen. The computer talks to you on the left side and your responses are on the right side. Use the up and down arrows to select your response and then press Return. When you want to move to another place press the --> or <-- arrows. Your new location will be shown on the bottom of the screen. While going from place to place you may be asked questions. If you do not want to answer the question press the --> arrow. If you do answer the questions correctly a line that appears on the bottom of the screen will move toward the right side. If you answer enough questions and the line reaches the other side you will be given a message that will take you to a place where you will see a Bowler hat. If you encounter a bowler you will be given a clue to the identify of the mystery person. In order to identify the mystery person you must go back to Victoria Station and meet the stranger. You may then guess the name of the mystery person. You will have "ten days" to find the mystery person. Good Luck! Write down the CLUES and MESSAGES you receive on a page in your notebook!

3. Allow students enough time to work on this activity. It will take most students at least 25 minutes to complete the ten days. Discuss the progress made by the students.

Summary:

1. What is the British expression used in saying good-bye?
2. What other expressions were used by the British that are unique?
3. What are three facts about London that you did not know before?
4. What parts of London interest you the most? Why?

Homework:

Select a famous British person. List five facts about that person.

Enrichment:

Select a famous British family and write a report describing the individual members and what made the family special.

Looking for Dr. X

You have arrived at Victoria Station. The person who greets you will tell you that in order to get your return ticket you must find the mystery person. You must first find the hotel in which you are staying. The program consists of screens containing a picture and two dialog boxes at the top of the screen. The computer talks to you on the left side and your responses are on the right side. Use the up and down arrows to select your response and then press Return. When you want to move to another place, press the --> or <-- arrow. Your new location will be shown on the bottom of the screen. While going from place to place, you may be asked questions. If you do not want to answer the question, press the --> arrow. If you do answer the questions correctly, a line that appears on the bottom of the screen will move toward the right side. If you answer enough questions and the line reaches the other side, you will be given a message that will take you to a place where you will see a Bowler hat. At that point you will be given a clue to the identity of the mystery person. In order to identify the mystery person you must go back to Victoria Station and meet the stranger. You may then guess the name of the mystery person. You will have ten days to find the mystery person. Good Luck! Write down the CLUES and MESSAGES you receive on your worksheet!

Topic 32: U. S. States And Capitals (A Mystery Exploration Game)

Aim: When given clues as to identity and city of hiding, can you catch a thief who travels around in the U.S.A. before time runs out on the case?

Performance Objectives: Students will be able to:

- locate states and capitals
- identify map symbols
- trace routes on maps
- recall and use information
- analyze and evaluate information
- use information to make decisions and solve problems
- use reference materials
- collect information from a travel guide, encyclopedia, atlas and dictionary
- identify supporting details
- draw inferences and conclusions
- make judgments based on information read
- understand figurative language
- predict outcomes based on prior knowledge
- recall details

Vocabulary: creole, spelunking, classical music, opera, fortunes, gambling

Materials:

- Apple II or MS DOS computer lab
- software: Where in the U.S.A. is Carmen Sandiego? by Broderbund
- copies of a U.S.A. map showing 50 states and capital cities
- copies of Fodor's U.S.A. travel guide, atlas, encyclopedia, dictionary
- dossiers sheet

Motivation:

Explain that Carmen Sandiago has just escaped from jail in Europe. She has recruited fifteen more members for her Villain's International League of Evil or (V.I.L.E) organization. Somehow she evaded detection and entered the United States. She is now somewhere in the United States.

Development:

1. Explain that there are now eight male and eight female members in the gang. Carmen Sandiego is the leader. The gang goes around the U.S.A. stealing valuable treasures and outwitting crime fighters. Our job is to join the Acme Detective Agency to track down and arrest members of Carmen's gang using clues discovered in the investigation.

2. Explain to the students that the criminals in this software have certain distinct characteristics. The crime computer has dossiers on each gang member. Hand out copies of the police dossiers for students to read. After the dossier have been read, ask if there are any questions about the crooks.

3. Hand out copies of a U.S.A. map showing 50 states and capitals. Explain to the students that criminals like to move around from one city to the next to stay one step ahead of the law and avoid capture. The map shows which states and cities the crooks can escape to when being chased. To arrest the villain, we must be in the same city and have an arrest

warrant. We must read the clues in the program to figure out which one of the sixteen suspects is the thief and in what city the thief is located. We are given a certain amount of time to capture the thief. If we don't capture the thief in the required time, then he/she gets away with the stolen object.

4. Explain that students are to use Fodor's U.S.A. Travel Guide. In it there is information about all 50 states. This information will help you know where the villain is fleeing so that you can stay on his trail. Use an atlas to find the location of geographical names and places. Use a dictionary to find the meaning of strange words that might be clues to what state or city the criminal is fleeing to. Using all the above reference material will keep you hot on the crook's trail.

5. Explain at the chalkboard the following: When you play the game you will see four choices on the lower right-hand corner of the screen that read as follows:

   See connections
   Depart by plane
   Investigate
   Crime Computer

   Explain that by choosing "See connections" we learn what cities we can fly to in pursuit of the criminal. If we go to the wrong city, the criminal could get away.

   When choosing "Depart by plane" we choose the city we want to fly to when we chase the criminal.

   When choosing "Investigate" we are given three places to go to investigate where the criminal might be hiding. Go to all three places and read the clues as to what city the criminal might flee to next and make a list of the following about the criminal:

   Sex:
   Hair Color:
   Favorite Food:
   Favorite Sport:
   Hobby:
   Music:

   When you know three or four distinguishing characteristics for the above choose Crime Computer. List the characteristics about the criminal you have learned, leaving the other choices blank and go to "compute." Interpol will then give you an arrest warrant. With this arrest warrant, you can capture the criminal in the next city you investigate. Remember, you need an arrest warrant first to capture a criminal.

6. Explain how to start the program. Demonstrate at one computer one game. Place side A in the disk drive and load the program. Press any key during the graphics presentation and the program starts. When requested to log on, type in your name and press Return. Answer any other question and press Return. Follow directions on the screen to flip disk to side B to start the investigation.

7. On the chalkboard have a student list the information that is learned about the criminal by choosing "Investigate:

Sex:
Hair Color:
Favorite Food:
Favorite Sport:
Hobby:
Music:

Use the clues and follow the criminal to the next city by using "See connections." Have students use Fodor's U.S.A. Travel Guide, an atlas, U.S.A. map supplied, or an encyclopedia.

When you know three or four characteristics about the criminal, choose "Crime Computer" and get an arrest warrent.

Choose "Depart by plane" to follow a thief to the next city. Clues to where the thief is going are given on the screen. Use a dictionary to help with words not understood.

After you have a search warrant, you can catch the thief at the next city.

8. Tell students to play their own game now. Allow 30-40 minutes of playing time to master the game. After you solve one case, you can start on another. The computer keeps a count of the number of cases solved and increases your rank as a detective as you solve more cases. Tell the students that they can save the game they are presently working on if time runs out. To save a game, go to "Crime Computer" and choose "Save Case." The computer will tell you when the case is saved.

Summary:

1. How does Fodor's U.S.A. travel guide help in this game?
2. How does the U.S.A. map of states and capitals help you in this game?
3. What clues were needed to find out which criminal did the crime?
4. How did you know where to travel to be hot on the criminal's trail?
5. How do you catch a member of the gang in this game?
6. Name as many U.S. states and their capitals as you can.

Homework:

Make up a new thief for Carmen's gang of robbers. Create a police dossier on this new thief. Tell us the following:
a. Name
b. Sex
c. Favorite Food
d. Hobby
e. Hair Color
f. Music
g. Favorite Sport
h. Other miscellaneous information
i. How he or she became a thief
j. What states he/she would most likely use as a hideout, and why.

Enrichment:

Do a state study. Choose one state from Fodor's U.S.A. travel guide and do the following:

a. Make a detailed map of the state
b. Show its geographical regions

c. Give its practical information
d. Historic Sites
e. Sports
f. Noteworthy museums

Police Dossiers Of Carmen Sandiego's Gang Members

Males

	Characteristics				
Name	Hair	Food	Sport	Hobby	Music
Alexander Graham Edison	brown	southern	basketball	auto repair	opera
Benjamin Hana	black	creole	hockey	gambling	country
Ken Hartley Reed	brown	seafood	basketball	spelunking	classical
Karl La Fong	black	Tex/Mex	football	fortunes	rock
Mylar Naugahyde	blond	southern	baseball	gambling	opera
Sheriff Paul Drive	blond	creole	baseball	auto repair	country
Sven Galli	red	Tex/Mex	hockey	fortunes	rock
Titus Canby	red	seafood	football	spelunking	classical

Females

B.B.D. O'Brien	brown	seafood	baseball	spelunking	classical
Brenda & Cobina Vanderbelt	red	seafood	football	spelunking	country
Gypsy Rose Lasagna	black	Tex/Mex	basketball	fortunes	rock
Heidi Gosikh	blond	southern	hockey	auto repair	country
Polly Ester Fabrique	brown	seafood	baseball	fortunes	opera
Venus H. Pencil	blond	southern	hockey	auto repair	country
Wendy Pauper	red	seafood	football	gambling	rock
Carmen Sandiego	black	Tex/Mex	basketball	gambling	classical

Topic 33: Countries Of The World (A Mystery Exploration Game)

Aim: Before time runs out, can you catch a thief who flies around the world, when given clues to the identity and city of hiding?

Performance Objectives: Students will be able to:

- locate major countries and capitals
- interpret map symbols
- trace routes on maps
- recall and use information
- analyze and evaluate information
- use information to make decisions and solve problems
- use reference materials
- collect information in an almanac, encyclopedia, atlas and dictionary
- identify supporting details
- draw inferences and conclusions
- make judgments based on information read

Materials:

- Apple II MS DOS computer lab
- software: Where in the World is Carmen Sandiego? by Broderbund
- copies of a world map showing nations and certain cities (at end of plans)
- copies of police dossiers of criminals
- copies of selected vocabulary used in program
- copies of an almanac, atlas, encyclopedia, dictionary, homework worksheet

Vocabulary: auburn, avid, brunette, carat, compulsive, croquet, dossier, fedora, freelance, glean, gourmet, hardboiled, impeccable, limousine, mallet, marsupial, miscellaneous, nefarious, occupation, predilection, proprietress, pilfer, raven-haired, seedy, Sherpa, trenchcoat, tresses, trounce, vile, windfall, aerobic, yogurt, speedster, bicep, shellfish, almanac, atlas, encyclopedia, dictionary

Motivation:

Teacher plans the following with the help of a student: Just as students seated in the computer lab, have one student wearing a hat, mask across part of face, a rag tied on one arm, gloves on hands and a knapsack on the back, run through the classroom door and start acting like a criminal looking for something to steal. Have the criminal act suspicious by looking all ways, right and left, up and down, all around the classroom. When the criminal reaches the flag, it is pulled out of its holder and the thief says: Ha, Ha! I've got it now!" and runs out of the classroom. As the thief leaves, the teacher shouts: "Stop thief! Stop thief!" All this occurs in less than fifteen seconds.

Development:

1. After the class settles down, the teacher states that what the students just witnessed is an introduction to the software program they will be using shortly called, Where in the world is Carmen Sandiego? Explain that Carmen and her gang of felons belong to the Villains' International League of Evil (or V.I.L.E). There are five male and five females members in the gang. Carmen Sandiego is the leader. The gang goes around the world stealing valuable treasures and outwitting crime fighters. Our job is to join the Ace Detective Agency and track down and

arrest members of Carmen's gang by using clues discovered in the investigation.

2. Ask students what they noticed about the suspect who stole the flag from the classroom. After exhausting all the items the thief wore, explain to the students that the criminals in this software have certain distinct characteristics. The crime computer has dossiers on each gang member. Hand out copies of the police dossiers to each student to read. Also hand out the selected vocabulary list. After the dossier have been read, ask if there are any questions about the crooks. Have the students fill in the meaning of each of the selected vocabulary words.

3. Hand out copies of world map showing certain nations and cities used in the program. Explain to the students that criminals like to move around from one city to the next to avoid capture. The map shows which cities the crooks can escape to when being chased. To arrest the villain, we must be in the same city as he/she is and have an arrest warrant. We must read the clues in the program to figure out which one of the ten suspects is the thief and in what city the thief is located. We are given a certain amount of time to capture the thief. If we don't capture the thief in the required time, then he/she gets away with the treasure.

4. Explain that reference material information on nations is located in the general index located in front of an almanac. An encyclopedia also gives information on countries. An atlas, globe, or world map is to be used to find the location of nations and cities of the world. Use a dictionary to find the meaning of strange words that might be clues to the country the criminal is fleeing to in order to avoid capture.

5. Explain at the chalkboard the following. When the game is played, you will see four choices on the lower right-hand corner of the screen that, read as follows:

   See connections
   Depart by plane
   Investigate
   Visit Interpol

   Explain that by choosing "See Connections" we learn what cities we can fly to in pursuit of the criminal. If we go to the wrong city, the criminal could get away.

   When choosing "Depart by plane" we choose the city we want to fly to when we chase the criminal.

   When choosing "investigate" we are given three places to go in order to investigate where the criminal might be hiding. Go to all three places and read the clues as to what city the criminal might flee to next and make a list of the following about the criminal:

   Sex:
   Hobby:
   Hair Color:
   Feature:
   Auto:

   When you know three or four distinguishing characteristics for the above, choose "Visit Interpol." List what characteristics about the criminal you have learned, leaving the other choices blank and go to "compute." Interpol will then give you an arrest warrant. With this arrest warrant,

you can capture the criminal in the next city you investigate. Remember you need an arrest warrant first to capture a criminal.

6. Explain how to start the program. Demonstrate one game at a computer. Place side A in the disk drive and load the program. Press any key during the graphics presentation and the program will say to turn the disk over to side B and press any key. Type in your name when requested and press Return. Answer any other question and press Return. Game starts.

7. On the chalkboard have a student list the information that has been learned about the criminal by choosing Investigate:

   Sex:
   Hobby:
   Hair Color:
   Feature:
   Auto:

   Use the clues and follow the criminal to the next city by using "See connections." Have students use an atlas, world map supplied, or globe.

   When you know three or four characteristics about the criminal, choose "Visit Interpol" and get an arrest warrant.

   Choose "Depart by Plane" to follow a thief to the next city. Clues to where the thief is going are given on the screen. Use a dictionary to help with words not understood.

   After you have a search warrant, you can catch the thief at the next city.

8. Tell students to play their own game now. Allow 10-20 minutes of playing time to master the game. After they solve one case, they can start on another. The computer keeps a count of the number of cases solved and increases their rank as a detective in keeping with the number of cases solved.

Summary:

1. How does an atlas help in this game?
2. How does the world map of certain cities and nations help you in this game?
3. In what way would a globe help in this game?
4. How did you find out which criminal in Carmen Sandiego's gang pulled off the robbery?
5. How did you know where (to which city) to go to catch a member of the gang?
6. How do you catch a member of the gang in this game?
7. What were some interesting facts you learned about Europe?
8. In what ways is Europe different from the U.S.? (languages, etc.)
9. If you were going to Europe, where would you like to visit? Why?

Homework:

1. Make up a new thief for Carmen's gang of robbers. Create a police dossier on this new thief. Tell us the following:
   a. Name
   b. Sex
   c. Occupation

d. Hobby
e. Hair Color
f. Special Feature
g. Auto
h. Other miscellaneous information
i. How he or she became a thief
j. The names and capitals of five European countries this thief might use as a hideout.

Enrichment:

1. Use an almanac or encyclopedia to find the following information on any country of Europe, Asia, or Africa which is to be used in a data base of information:
   a. Name of Country
   b. Ethnic groups
   c. Languages
   d. Religions
   e. Topography
   f. Capital
   g. Population
   h. Currency
   i. Flag colors
   j. Major cities
   k. Industries
   l. Minerals
   m. Chief crops

2. Draw any ten flags of the world and list their colors and any special symbols.

Class _____ Name _____

Selected Vocabulary

These are special words used in the software. Students will utilize more information more readily if they know the meanings of these words first.

aerobic
almanac
atlas
auburn
avid
bicep
brunette
carat
compulsive
croquet
dictionary
dossier
encyclopedia
fedora
freelance
glean
gourmet
hardboiled
impeccable
limousine
mallet
marsupial
miscellaneous
nefarious
occupation
predilection
proprietress
pilfer
raven-haired
seedy
shellfish
Sherpa
speedster
trenchcoat
tresses
trounce
vile
windfall
yogurt

Police Dossiers Of Carmen Sandiego's Gang Members

Name: Carmen Sandiego - nicknamed "Buffy"
Sex: Female
Occupation: Worked as a former spy in the Intelligence Service of Monaco.
Hobby: Playing tennis
Hair Color: Auburn (reddish-brown)
Feature: Always appears wearing a ruby necklace.
Auto: Convertible (model 1939 Packard)
Miscellaneous: She loves eating tacos.

Name: Merey LaRoc
Sex: Female
Occupation: Does aerobic dance work anywhere
Hobby: Climbing mountains
Hair Color: Brown
Feature: Loves to be seen wearing fancy jewelry.
Auto: Limousine with fancy interior
Miscellaneous: Likes only foods that are spicy

Name: Dazzle Annie Nonker
Sex: Female
Occupation: Owner of a yogurt bar
Hobby: Playing tennis
Hair Color: Blond
Feature: You can see a tattoo
Auto: Limousine (model Bugatti)
Miscellaneous: Loves to eat shellfish

Name: Lady Agatha Wayland
Sex: Female
Occupation: Reads English mystery stories
Hobby: Playing tennis
Hair Color: Red
Feature: Diamond ring the size of a grapefruit
Auto: Speedster (model Denghby)
Miscellaneous: Likes to eat at Mexican restaurants

Name: Katherine Drib - nicknamed "Boom-Boom"
Sex: Female
Occupation: Races motorcycles
Hobby: Keeping fit and healthy
Hair Color: Not known
Feature: On left bicep is a tattoo of an eagle
Auto: Motorcycle
Miscellaneous: Gourmet seafood cook, and is interested in mountain climbing

Name: Len Bulk - nicknamed "Red"
Sex: Male
Occupation: Ex-hockey placer and gambler
Hobby: Making wagers
Hair Color: Not known
Feature: On his right thumb is a tattoo of a mermaid
Auto: Convertible
Miscellaneous: Loves to eat seafood

Name: Scar Graynolt
Sex: Male
Occupation: Guitarist who plays folk music
Hobby: Plays croquet well
Hair Color: Red
Feature: On his pinky is a five carat ring
Auto: A shaded window limousine
Miscellaneous: He has a tall man-servant help him

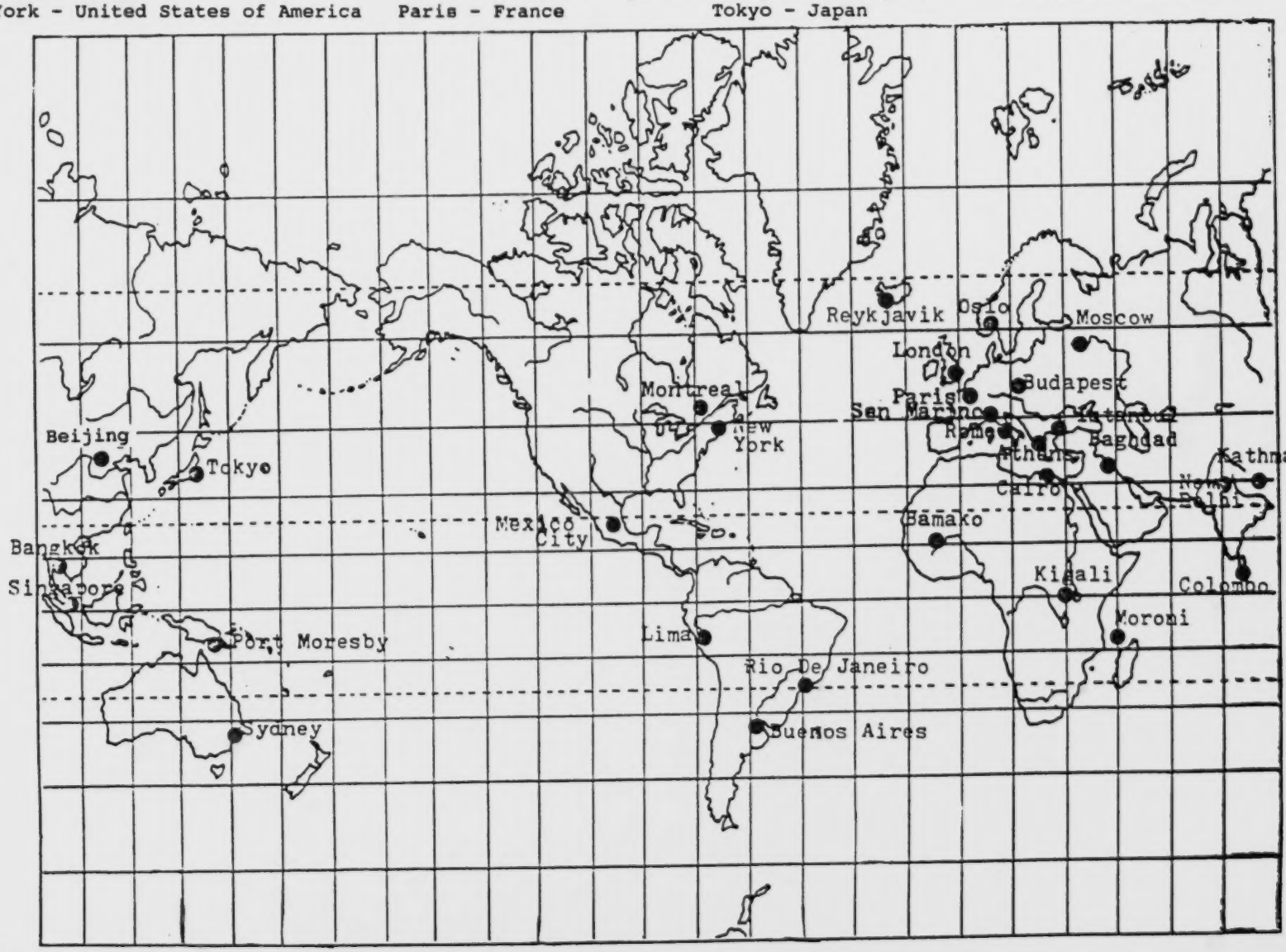
Name: Nick Brunch
Sex: Male
Occupation: Formerly was a private eye
Hobby: Climbs mountains
Hair Color: Black
Feature: He wears trenchcoat that is dirty, a fedora, and a Dick Tracy ring. He has a mustache and brown eyes.
Auto: Motorcycle
Miscellaneous: Both he and his best friend Scar like Mexican food.

Name: Fast Eddie B.
Sex: Male
Occupation: Renowned world-class croquet player
Hobby: Not known
Hair Color: Red
Feature: Leaves diamond stickpin at his crimes
Auto: Not known
Miscellaneous: Dresses impeccably and likes Mexican food

Name: Ihor Ihorovitch
Sex: Male
Occupation: A Czarist throne pretender
Hobby: Must see cartoons every Saturday morning
Hair Color: Blond
Feature: You can see a tattoo
Auto: Limousine
Miscellaneous: Likes large marsupials, and eats lobster

City and Nations Map

Beijing - People's Republic of China
Bangkok - Thailand
Singapore - Singapore
Port Moresby - Papua New Guinea
Sydney - Australia
Montreal - Canada
New York - United States of America
Lima - Peru
Rio de Janeiro - Brazil
Buenos Aires - Argentina
Reykjavik - Iceland
Oslo - Norway
London - United Kingdom
Paris - France
San Marino - San Marino
Rome - Italy
Athens - Greece
Bamako - Mali
Kigali - Rwanda
Moroni - Comoros
Budapest - Hungary
Tokyo - Japan
Moscow - USSR
Istanbul - Turkry
Baghdad - Iraq
Cairo - Egypt
Kathmandu - Nepal
New Delhi - India
Colombo - Sri Lanka



128

129

Topic 34: European Cities And Countries

Aim: Where in Europe is Dr. X?

Performance Objectives: Students will be able to:

- cite important facts about European cities and countries
- evaluate information and deduce the whereabouts of a person in Europe
- simulate traveling in Europe

Do Now:

Where did Columbus come from?
Discuss the possible answers to this question. Some students will refer to his birthplace and others will cite the country that sent him to the New World.

Materials:

- Apple II computer lab
- software: The Spy's Adventures in Europe by Polarware
- student notebooks or folders
- wall-sized map of Europe

Motivation:

Refer to the map of Europe and describe some of the famous events that have occurred there over the centuries. Today, we are going to try to solve one of the most famous mysteries of European history - the location of Dr. Xavier Tortion (Jewel smuggler, thief and terrorist - alias Dr. X). If you were Dr. X, where would you hide in Europe? Why?

Development:

1. Dr. X is somewhere in Europe. Your job is to find him. In addition, you will be trying to recover jewels that have been hidden. Informants will help you with information; however, you may have to pay them off in jewelry. Some clues to the location of Dr. X are in the form of letters that make up a name or location in the area where Dr. X is hiding.

2. The only keys that you will operate for this program are the Space bar. Return and Escape. The Space bar is used to make choices. The Return key gets the next action started. Escape moves you to the Dossier Screen that provides information about the region that you are in and gives alternative courses of action including guessing if Dr. X is in the region. You only have three guesses.

3. Write the following on the board for the students to copy into their notebooks or folders.

Place	Interesting Fact

4. Load the disk into the computer. Follow the instructions to fill in your name or the names of the people (up to 6) who are going to use the disk. Students should write down facts that they have learned about places on the worksheet. Good luck.

5. Allow about 20 minutes for the students or groups to complete their task. Discuss any unusual or interesting cases that they have encountered.

6. Ask a student to come to the board and act as the class secretary. Other students will provide information from their worksheet so that all students will share the facts that they have learned about Europe.

Summary:

1. Which country in Europe did you find to be the most interesting? Why?
2. What problems do you think that you would have if you were traveling in Europe?

Homework:

Select one city that you have on your worksheet and find out three additional facts about it. You can use an atlas, encyclopedia or your textbook for your answer.

Enrichment:

Create a travel folder with information on one or more European cities. Your folder should consist of maps, travel posters (either commercially made or made by you, and other interesting facts about the city or cities that you have chosen.

Topic 35: Paris

Aim: How well can we get around in Paris?

Performance Objectives: Students will be able to:

- describe important locational facts about Paris
- assess clues in order to find a secret answer
- state the meanings of at least ten words or expressions
- simulate a trip to Paris

Materials:

- Apple II computer lab (An MS DOS version is also available.)
- software: Ticket to Paris by Blue Lion Software Corp.
- student notebooks or folders
- wall-sized map of France (or Europe)

Do Now:

What is the capital of France? Name the capitals of two other European countries.

Motivation:

Refer to the map of France or Europe. Many cities in the world are famous. However, Paris is one that stands out from the rest. In many ways it is unique. Discuss its location and some of the factors that might make it unique.

Development:

1. The computer will assist us in exploring Paris and we will be playing a game at the same time. Winners need to get 250 points. The program that we will be using simulates a trip to Paris. You are looking for a relative and must find clues that will help you locate your relative.

2. Load the disk into the computer. Type in your name. Select either man or woman. You will then have a choice of running the program in English or French. Then select No for sound. At the appropriate time the computer will ask you to turn the disk over to the other side.

3. Five icons appear at the bottom of most screens. They will help you in your search for your relative. One will provide you with a dictionary of French words and phrases. Another will keep you informed of your own health during your search. Use the icons when necessary. You receive points for your correct actions. Students should copy the following into their notebooks or folders.

Place	Fact	French Word	Meaning

Good Luck!

4. Allow students between 20 and 30 minutes to use the program. They can save their place in the program if they run out of time. Discuss what the students found to be the most interesting things they learned about Paris.

Summary:

1. Ask students to tell the class one of the French words that they wrote down on their list. Other students should be called upon to define the word in English.
2. Elicit some of the clues that the students used. Ask students to explain the clue. Other students may be needed to explain the meaning of some clues for those who didn't know what they meant.
3. What places in Paris would be on your "must visit" list if you went there? Explain why.

Homework:

Describe three important and interesting places in Paris using a complete paragraph for each.

Enrichment:

Prepare a travel brochure for Paris. Include descriptions of well-known tourist attractions and other places of interest that you would want to visit if you were in Paris. Use pictures from magazines and travel brochures or make them yourself.

GEOGRAPHY OF AFRICA

134

Topic 36: Introduction To African Geography I

Aim: How can we learn about the nations of Africa through map work?

Performance Objectives: Students will be able to:

- recognize the various regions of Africa
- identify the various nations of Africa
- score over an 80 percent rating on all the different quizzes testing for recognition of the various nations of Africa
- correctly label a map of Africa with all its nations

Materials:

- Apple II or IIe, Radio Shack TRS-80 Mod III, or Commodore PET computer lab (color Monitor is desirable)
- software: Africa, Disk Two: Mapwork on Africa by Educational Activities Inc.

Do Now:

How many nations do you think there are in all of the continent of Africa? Write down that number, then list as many nations in Africa as you know.

Motivation:

Which continent has the most nations? Of the seven continents, in what place does Africa rank in size (square miles)? Of all the continents which one has the fastest growing population? (Africa has the most nations (54). Africa is second in size after Asia. Africa has the fastest-growing population rate.)

Development:

1. Discuss with the class reasons why Africa is so important in today's world community of nations.

2. Ask students to name all the nations that they can from the "Do Now." Begin the mapwork on Africa with the class to show them how many nations there actually are in Africa.

3. Insert the disk and turn on the computer. The disk is self-loading. On this disk, students are taught to recognize and identify the countries, cities, and major physical features of Africa. For each category, students are first shown the maps with the features identified for them. They may choose to review these maps for as long as necessary. Then they are quizzed on the information they have just "learned."

4. The countries; the first part teaches the countries, region by region.

North Africa	West Africa
Morocco	Western Sahara
Algeria	Mauritania
Tunisia	Mali
Egypt	Niger
Libya	Senegal
East Africa	The Gambia
Sudan	Guinea-Bissau
Ethiopia	Guinea

Djibouti
Somalia
Kenya
Uganda
Rwanda
Burundi
Tanzania

Central Africa
Cameroon
Central African Republic
Equatorial Guinea
Gabon
Congo
Zaire
Chad

Sierra Leone
Liberia
Ivory Coast
Upper Volta (Burkina Faseo)
Ghana
Togo
Benin
Nigeria

Southern Africa
Angola
Zambia
Zimbabwe
Malawi
Mozambique
Madagascar
Namibia
Botswana
South Africa
Swaziland
Lesotho

Mention that very small island nations have been omitted - Cape Verde, Comoro Islands, Reunion, Sao Tome and Principe, the Seychelles, and Mauritius.

6. The Countries Quiz consists of 20 identification questions (two from North Africa, four from East Africa, six from West Africa, three from Central Africa, and five from Southern Africa). These are chosen at random, so the student may repeat the quiz as many times as necessary, but it will never be exactly the same.

7. Your students will be kept informed after each answer about their score and the number of questions to follow.

8. Students who have difficulty with any region are automatically shown a review of that region at the and of the quiz.

9. Allow students to fill in a political map of Africa with all of its five major regions.

10. This activity will take an entire period.

Summary:

1. How does Africa rank in size compared to the 7 continents?
2. How many nations are found in Africa? Why can this be important at a political body such as the United Nations?
3. What are the five major areas of Africa?
4. Which area of Africa has the most nations?
5. Select a major area of Africa and name as many of its countries as you can.

Homework:

1. Using your completed political map of Africa, draw in a major geographic feature for each of the five areas.
2. Explain how you think this feature affects that area.

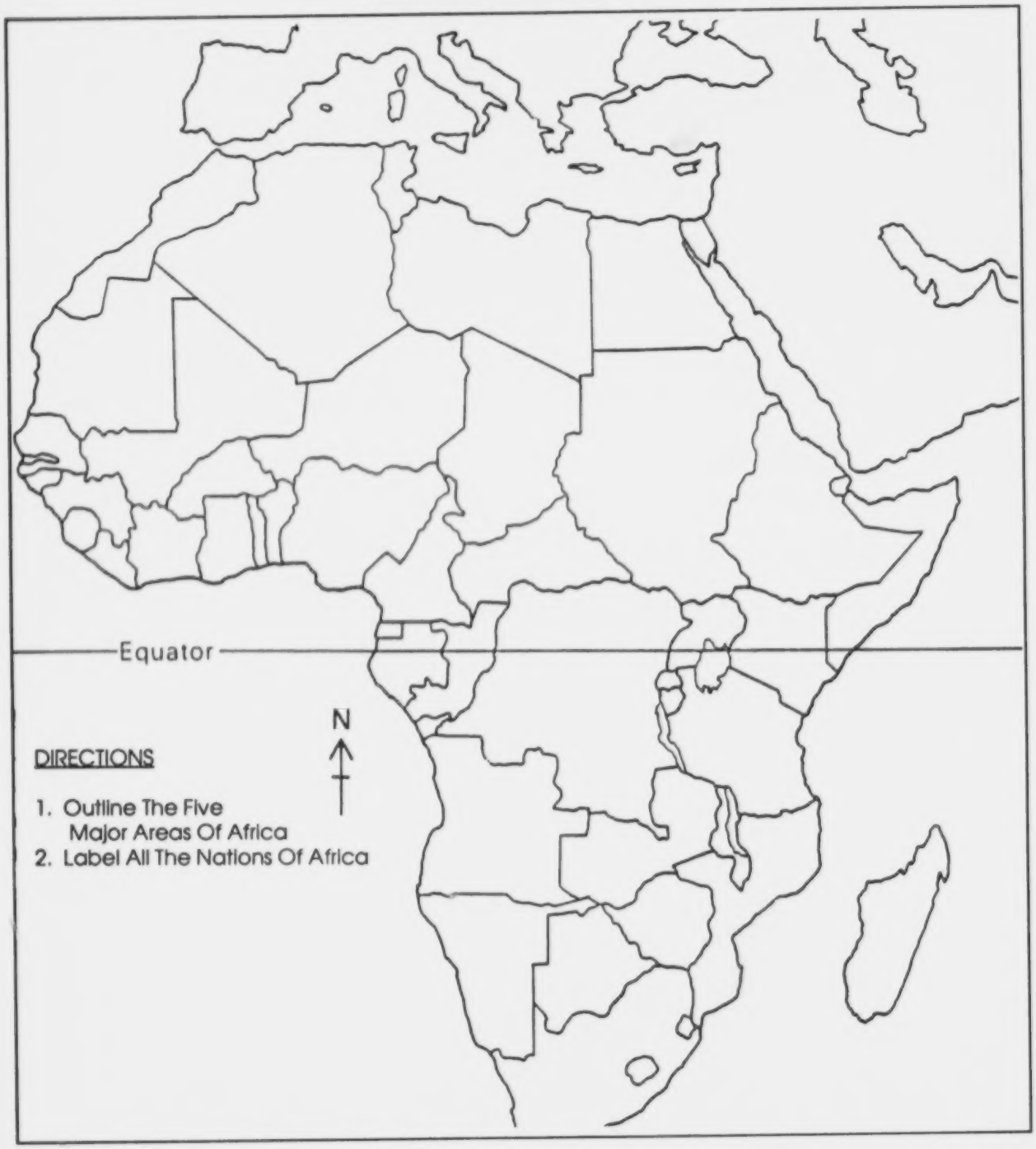
Enrichment:

1. Choose one nation and trace its history from colonialism to independence.

2. Show how certain areas of Africa were dominated either by the British, French, Belgians, or the Portuguese. Explain how their influences are still found in the independent nations of Africa.

NAME _____ CLASS _____

AFRICA, POLITICAL



Topic 37: Introduction To African Geography II

Aim: How has Africa's geography affected its history?

Performance Objectives: Students will be able to:

- correct common stereotypes of Africa
- locate Africa's major cities, rivers, and landforms
- identify the major geographic features of the African continent
- emphasize the importance of Africa to the rest of the world
- discuss significant problems of Third World countries
- complete an outline map of Africa with its major cities, rivers and landforms

Materials:

- Apple IIc or IIe, Radio Shack TRS-80 Mod III, or Commodore Pet; color monitor is desirable
- software: Africa, disk one, Introduction to Africa, and disk two, Cities, Rivers, and Landforms, by Educational Activities, Inc.
- outline map of Africa

Do Now:

Write a short paragraph explaining what you have heard about Africa and Africans.

Motivation:

For some people the name "Africa" still conjures up outdated images of Tarzan, elephants, jungles, and grass huts. How many of you agree with these images? Most North Americans know very little about Africa. This program has been designed to dispel many of the myths and to establish a solid foundation for the study of African geography and history.

Development:

1. Discuss with the class why there are so many misconceptions and stereotypes about Africa.

2. Tell students that the program you are about to use will clear up many of these misunderstandings.

3. Turn on the computers. The program is self loading. Sound can be used to enhance the program and to enliven the graphics. Sound may be turned on by typing CONTROL/S (sound) or CONTROL/Q (quiet).

4. Disk One: Introduction to Africa - This introduction begins with a series of ten true or false questions. The user first answers all the questions; then they may be reviewed one at a time. The correct answers are given along with a brief explanation for each one. Maps, graphs, and other illustrations are presented to show key points.
   Part One is built around ten questions, such as:
   T F 1. Africa is the largest country in the world.

   As these questions are explained, and the correct answers shown, the students are given facts and graphic examples of the reasons for these answers. To show Africa's diversity, all fifty-four countries are

displayed. The second section of Disk One is a riddle which describes a country with many problems and asks the students to guess what country it is. The answer is the United States. Many of your students will think it is some African nation. Disk One concludes with a quiz of ten questions. Disk Two should then be used.

5. When the Menu displays choices, type in 2 for CITIES. Ten major cities of Africa will be shown one at a time on a map of Africa. The class can then be quizzed on these cities. Return to the Menu and type the number 3 for PHYSICAL FEATURES, of which eleven are introduced. A quiz can then be given off the Main Menu.

Instructions for operating Africa Disk for Apple II

1. Insert the disk into the Drive. Use Drive 1 when two drives are present.

2. Turn on the computer and the monitor and wait until the IN USE light on the drive goes off.

3. The program will execute and "A" will be displayed. If this doesn't appear, restart the procedure.

4. After the introductory remarks have been displayed, the PROGRAM MENU will appear on the screen. Select the program by following the instructions on the screen.

5. If you would like to stop in the middle of a program, press the CTRL key and the "C" key simultaneously, then press RETURN. This will bring you back to the PROGRAM MENU.

6. To return to the beginning, press the CTRL key and the RESET keys simultaneously.

Summary:

1. What have you learned about Africa which changed your stereotyped image that continent?
2. Why do African nations face so many problems with their economies?
3. Define "monoculture."
4. How could African nations move away from monocultures?
5. Why is it important for African nations to diversify their economies?
6. Explain why Libya has such an unstable economy.
7. List and locate three deserts in Africa.
8. Name and locate the three major rivers of Africa.
9. Name and locate four major land features of Africa.
10. Explain how Africa's geography affects Africa's economy.

Homework:

Complete the worksheet (outline map of Africa).
Fill in the following:
Major Deserts - Sahara, Namib, and Kalahari.
Major Rivers - Nile, Zaire, and Niger
Major Cities - Algiers, Kinshasa, Lagos, Casablanca, Dar es Salaam, Johannesberg, Harare, Nairobi, Addis Ababa, Cairo.
Draw these land features: Rift Valley, Ethiopian Highlands, Atlas Mountains, Drakensberg Mountains.
Draw in major lakes: Victoria, Tanganyika.

Enrichment:

Research an African nation and then give an oral report on the economic, social, and political system of that nation.

NAME _____ CLASS _____

STUDENT WORKSHEET
OUTLINE MAP OF AFRICA

FILL IN THE FOLOWING:

Major Deserts
Sahara
Namib
Kalahari
Major Rivers
Nile
Zaire
Niger
Major Cities
Algiers, Algeria
Kinshasa, Zaire
Lagos, Nigeria
Casablanca, Morocco
Dar es Salaam, Tanzania
Johannesburg, South Africa
Cairo, Egypt
Addis Ababa, Ethiopia
Harare, Zimbabwe

DRAW THESE
LAND FEATURES:

Rift Valley
Ethiopian Highlands
Atlas Mountains
Drakensberg Mountains
Lake Victoria
Lake Tanganyika

Topic 38: Introduction to African Geography III

Aim: What will we learn about the nations of Africa through a travel adventure?

Performance Objectives: Students will be able to:

- identify all the countries of Africa
- recognize African countries by using contextual clues which describe the features of each country
- write the names of African countries correctly
- follow directional clues from the text
- complete a political map of modern Africa
- describe the continent's various geographic features and their effects on the continent of of Africa

Materials:

- Apple II computer lab
- software: World Geography Adventures - III and IV - Africa and Asia disks 1 and 2, by Queue Intellectual Software

Do Now:

Write a paragraph explaining what you would most like to see if you went on a trip to Africa.

Motivation:

Why do people take vacation trips to Africa?
Why do you think going to Africa could be exciting and a great adventure?

Development:

1. Discuss with the class reasons why it is important to learn about the African continent.

2. Explain that there are fifty-four nations in all of Africa including some small island nations near its coastline. Africa has about one-third of all the nations of the world. Introduce the program overview. Introduce the program oberview.

3. Insert disk 1 in the drive. If you try to boot up disk 2 you will be informed that it is not possible to boot the disk. Disk 2 cannot load into the computer without loading disk 1 first. If you are using an Apple IIe or IIc, make sure that the CAPS LOCK key is down.

4. These two disks will take you on a journey through all of Africa's nations and their capitals, largest cities, rivers, and other important geographic locations, throughout you will encounter numerous challenging geography questions.

5. You will start the journey at the Sinai Peninsula, entering Africa in Egypt. You may have "branching questions" which ask information about the nation that you have just entered.
Example 1. If there are 4 questions to answer while you are visiting Chad, the first question will be worth 10 points, the second, 100 points; the third, 150 points; and the fourth or "branching question," 200 points.

6. If you make an error on one of the locations described, the program will tell something about this locale.

7. You may wish to give out the political maps of Africa and have students fill in the sites as they journey through Africa.

8. You may program into the "Hall of Fame" to see who can achieve the highest score.

9. These two disks will probably take two periods to complete.

Summary:

1. Why is Africa such a varied continent geographically? Give some examples of this, based on the "journey" you have just taken.
2. Which large city in Senegal is the most western part of Africa? Why would Dakar's geographic location make it an important city?
3. Discuss how the Sahara Desert affected Africa politically, economically, and socially?
4. Why do you think Africa was called "the dark continent" for many centuries?
5. Why has this image of Africa changed?

Homework:

Find a major geographic feature of Africa and research how it affects the people of that region.

Enrichment:

1. Choose any of Africa's largest nations or geographic features and give an oral report about it to the class.

2. Visit the United Nations and seek an appointment to speak with a representative from an African nation. Discuss the effect the United States may have on that country.

Topic 39: Sub-Saharan Africa: The North

Aim: Why is Sub-Saharan Africa an important region for Americans to know about?

Performance Objectives: Students will be able to:

- identify and name major areas on a political map of Africa
- match capitals with their countries
- list pertinent information for each country: population, area, money, language
- compare and contrast countries based on information retrieved from Atlas program

Materials:

- MS DOS computer lab
- software: Concepts Computerized Atlas by Software Concepts, Inc.
- wall map of Africa
- individual copies of handout sheets: Sub-Saharan Africa Fact Sheet, Part I and Map of Sub-Saharan Africa

Motivation:

Write SUBWAY and SUBMARINE on chalkboard. Ask students: What do these words have in common? Elicit response that the prefix "sub" means "under." Explain that the computerized program they will be using will involve retrieving information about Sub-Saharan Africa. Ask: Where will you find Sub-Saharan Africa? What is another way of describing Sub-Saharan Africa? (Africa south of the Sahara.) Have students locate the general areas and specific countries of this region on the wall map.

Development:

1. Develop students' understanding of the importance of accurate information about the nations of Africa, e.g., strategic importance to U.S., correcting myths about the "dark continent."

2. Distribute Fact Sheet and Map. Since you may not want the students to retrieve atlas information for all the countries on the Fact Sheet, verbally check off those countries for which you want the students to find the location and information. Instruct the students that as each country is located, the corresponding space on the Map of Sub-Saharan Africa must be labeled.

3. Review use and handling of computer diskettes. To start program, insert DOS disk into Drive A. When date and time are requested, press ENTER. When A> appears, remove DOS disk and load Atlas disk into Drive A. Type in ATLASPC or ATLASJR (choose according to type of computer you are working with). Press ENTER. After copyright is displayed, press ENTER. Program will load. When a map appears on the screen, the blinking cursor may be located at the lower right hand corner of the screen. Press END to move cursor to center of screen.

4. Press F3 to open third menu, Continent. Move cursor to Africa. Press ENTER. Now press F2 for second menu, Fact. Screen will display a map of Africa. Use arrow keys to move cursor into a designated area. For information on each preselected country, instruct students to move cursor to NW corner of map.

5. Instruct students to copy pertinent information onto "Sub-Saharan Africa Fact Sheet, Part I" and to label each country on "Map of Sub-Saharan Africa" as they identify and retrieve information for each country going from NW to NE.

6. After each country is completed, press ENTER to move the cursor to another country.

7. Allow students 15-20 minutes to complete activity.

Summary:

1. Which country is located in the NW corner of the map? What is its capital? money? language?
2. If a European language, such as French, appears on the language information section for a country, what does that reveal about that nation's past history?
3. Which nations speak a European language? What are the probable routes the Europeans took to reach those African nations?
4. What country is directly south of Niger?
5. Which country is directly east of Niger?

Homework:

To compare and contrast the northern Sub-Saharan African nations, divide a sheet of looseleaf into two columns. Label one column AREA, the other POPULATION.

List the countries in descending order starting with the largest area and largest population. Answer the following questions:

1. Does the country with the largest area also have the largest population? Explain.

2. What conclusions can be drawn about those countries using just the information on land size and population?

3. How do geographical factors affect population?

Enrichment:

1. Follow newspaper and magazine articles for additional information on the northern Sub-Saharan African countries. Add this information to your Fact Sheet.

2. How can you connect many events in Africa today with their roots in African geography?

3. What economic advantages do countries on Africa's coastline have?

Map Of Sub-Saharan Africa

SAHARAN NATIONS

147

Sub-Saharan Africa Fact Sheet
Part I: The North

COUNTRY	POPULATION	AREA	CAPITAL	MONEY	LANGUAGE
BENIN					
BURKINA FASO					
CAMEROON					
CAPE VERDE					
CENTRAL AFRICAN REP.					
CHAD					
CONGO					
EQUATORIAL GUINEA					
ETHIOPIA					
GABON					
GAMBIA					
GHANA					
GUINEA					
IVORY COAST					
KENYA					
LIBERIA					
MALAWI					
MAURITANIA					
NIGER					
NIGERIA					
RWANDA					
SÃO TOMÉ&PRINCIPE					
SENEGAMBIA					
SIERRA LEONE					
SOMALIA					
TOGO					
UGANDA					

Topic 40: Sub-Saharan Africa: The South

Aim: What are the political boundaries in southern Sub-Saharan Africa?

Performance Objectives: Students will be able to:

- identify and name the countries of southern Africa
- list pertinent information for each country: population, area, capital, money, language
- compare and contrast characteristics of the various countries
- explain currency rates for certain south African currencies

Materials:

- MS DOS software lab
- software: Concepts Computerized Atlas by Software Concepts, Inc.
- individual copies of handout sheets: "Map of Sub-Saharan Africa," "Sub-Saharan Africa Fact Sheet, Part II: The South," and "Currencies."

Motivation:

When we speak of the South in the U.S., we are referring to a specific political and geographic region, as well as a compass direction. The same is true of south Africa. Why? Explain. Discuss South Africa as a country and south Africa as a political and geographic region.

Development:

1. Have students locate the general areas and specific countries of this region on a wall map.

2. Elicit facts they already know about certain countries, e.g., Angola, South Africa. Develop understanding of why this region is important to U.S. foreign policy.

3. Distribute fact sheets and maps. Since you may not want the students to retrieve atlas information for all the countries on the Fact Sheet, verbally check off those countries for which you want the students to find the location and information. Instruct the students that as each country is located, the corresponding space on the map of Sub-Saharan Africa must be labeled.

4. Review use and handling of computer diskettes. To start program, insert DOS disk into drive A. When date and time are requested, press ENTER. When A> appears, remove DOS disk and load Atlas disk into drive A. Type in ATLASPC or ATLASJR (choose according to type of computer you are working with). Press ENTER. After copyright is displayed, press ENTER. Program will load. When a map appears on the screen, the blinking cursor may be located at the lower right hand corner of the screen. Press END to move cursor to center of screen.

5. Press F4 for fourth menu - SHOW. Move cursor to south Africa. Press ENTER. Instruct students to move cursor from one country to the next. Press F2 for Facts. Fill in Fact Sheet and Map. ENTER key must be pressed before cursor can be moved to another country.

6. Allow students 15-20 minutes to complete activity.

Summary:

1. Which two countries are contained wholly within south Africa? What problems might this cause?
2. Which country is named after an ancient African kingdom? What was its former name?
3. Which nation is located on an island in the Indian Ocean?
4. In which country is Afrikaans a major language?
5. In which country is Portuguese a major language?
6. Explain what is meant by "apartheid" and why most of the world publicly opposes it.

Homework:

1. Distribute individual copies of "Currencies" handout. This worksheet contains a matching column and currency exchange column.

2. Assume the U.S. dollar fell 10%. How would that affect the African currencies?

Enrichment:

1. Research the political and social problems of Sub-Saharan Africa to the south. Use newspaper and magazine articles for information.

2. Explain: Between 1945 and the present, colonialism in Africa has disappeared. Why?

Map Of Sub-Saharan Africa

SAHARAN NATIONS

151

Sub-Saharan Africa Fact Sheet
Part II: The South

COUNTRY	POPULATION	AREA	CAPITAL	MONEY	LANGUAGE
ANGOLA					
BOTSWANA					
LESOTHO					
MADAGASCAR					
MALI					
MOZAMBIQUE					
NAMIBIA					
SOUTH AFRICA					
SWAZILAND					
TANZANIA					
ZAIRE					
ZAMBIA					
ZIMBABWE					

Currencies

Recently, a U.S. dollar was equivalent to $1.32 in Canadian dollars. On the other hand, a Canadian dollar is equivalent to approximately 75 cents in American currency. Major currency exchange rates fluctuate every day around the world.

Assume that you will be traveling to the southern part of Sub-Saharan Africa. Use the information from your fact sheet to match the currency listed below with its country. Draw a line from the country to the currency. Then use the exchange rate to answer the questions below.

MATCH

COUNTRY	CURRENCY	EXCHANGE RATE
ZIMBABWE	RAND	.48 = $1.00
ZAMBIA	FRANC	492 = $1.00
SOUTH AFRICA	KWACHA	1.40 = $1.00
MADAGASCAR	ZAIRE	33 = $1.00
ZAIRE	DOLLAR	1.10 = $1.00

1. If tickets for a rock concert cost $40.00 each in the US, how much would each ticket cost in Zimbabwe dollars?
2. If a tee shirt costs 5 rands, how much would it cost in American dollars?
3. If an ice cream cone costs $1.00 in the United States, how much would that cone cost in Zaire?
4. How many francs would you receive in exchange for $100.00 in Madagascar?
5. Would an American dollar be worth more or less in Zambia? Explain.

Topic 41: The Varied African Landscape

Aim: How does Africa's topography help or hurt its development?

Performance Objectives: Students will be able to:

- locate topographical features in the region such as the Sahara, Kalahari Desert, the Great Lakes Region, and important rivers
- explain how the region's topography has had a positive or negative effect on its development
- explain why where man lives influences the way he lives
- describe how earth changes man and how man changes earth

Materials:

- MS DOS computer lab
- software: One World Countries Database by Active Learning Systems
- handout: Fact Sheet
- outline map of Africa
- wall map of world

Do Now:

Locate Africa on the World Map (in text used) and list the countries that have deserts.

Motivation:

What do you think of when you consider the region of Africa? Student responses may include misconceptions about Africa, such as it is nothing but jungles. David Wiley observed "While (much of the) African terrain resembles Wisconsin or Iowa, Africa lives in the minds of most Americans as the teeming impenetrable jungle through which Bogart's African Queen endlessly plods." What does this quote mean?

Development:

1. Review student responses to the motivation. Challenge them to identify the natural forces and human activity that affect environmental quality in Africa.

2. Tell them that the program they are about to study contains a computer reference file of demographic and geographic information about countries of the world, including those of Africa. Elicit the types of data that would help us to understand the significant environmental factors in each country (latitude, proximity to ocean, etc.).

3. Load disk in Drive A (self-loading). Main menu will now appear on screen. Instruct students to try Option One on the main menu which is "Display a Country." Enter the name of the country or press the <RETURN> key to enter the country's number (Africa's numbers are 54-105). Press D to display the country information on the screen only. Next try Option #3 on the main menu. Choose Option #1, to analyze data. There are 20 categories of information which are used to sort the countries. Instruct students to choose up to three categories at any one time. To utilize other options, press N. Main menu will return.

4. Organize students into groups of four. Distribute fact sheet. Direct each group to research 5 specific African countries. The students proceed to work interactively with the computer and their groups to complete a review of pertinent database sections. Each student should complete a fact sheet.

5. Allow students a reasonable amount of time to complete the activity. Suggested time is 15 to 20 minutes. A teacher-directed review of the students' accumulated data will permit those with incomplete files to catch up.

Summary:

1. What are Africa's four major river? Where are they located?
2. Why is the lack of rainfall more serious to African farmers than to Americans?
3. Why does Africa have poor interior transportation and therefore, difficulties with trade?
4. Why are Africa's "great lakes" of less value for trade than the Great Lakes of North America?
5. What aspects of Africa's topography have hurt its development?
6. Which countries have an urban population greater than 90% of the total population?
7. How many countries have less than 10% of their area under cultivation?

Homework:

Draw a physical map of Africa include the major rivers, deserts, mountains and lakes.

Enrichment:

Africa has a variety of unusual landforms about which students could prepare brief reports to present in class. Among the landforms students might research are the Great Rift Valley, Victoria Falls, and Mount Kilimanjaro.

Name _____ Class _____
Date _____

Fact Sheet

1. This fact sheet is about: _____
(name of country)

2. Location
Continent_____
Bordering countries and bodies of water:
North _____
East _____
South _____
West _____
Latitude _____
Longitude _____

3. Size of the country and land use figures
Land size (in square miles/kilometers) _____
% desert _____
% cultivated _____

4. Population
population size _____
% urban _____
% rural _____
% work force engaged in:
primary production _____
manufacturing _____
service industries _____

5. Government
Type of government _____
The head of the present government is _____

Topic 42: Effects Of Geography And Resources On The Cultures And Economy Of South Africa

Aim: How do the geography and natural resources of South Africa affect its economy?

Performance Objectives: Students will be able to:

- identify the geography and resources of South Africa
- explain the relationship of geography and resources to an economy
- use the data base program to search for information

Materials:

- Apple or MS DOS computers
- software: One World Countries Database by Active Learning Systems
- dot matrix printer
- wall map of Africa

Motivation:

Ask the students: Why has South Africa been such a powerful country in Africa even though it has a repulsive racial policy? Elicit from the class the fact that a powerful economy with strong and vital exports are important factors in the overall picture. Its place at the southern tip of the continent makes it vital for protecting sea lanes from Europe to Asia. Tell the class the story line of the Broadway hit, Serafina. Read some of the lyrics.

Development:

1. Locate the country of South Africa on the wall map. Point out the factors described in the Motivation and discuss the neighboring countries and their relationship with South Africa.

2. Introduce the class to the data base program. Explain that the program can be used to investigate countries around the world in many categories. Allow the class 5-10 minutes to experiment with the program. Then select the Display a Country option. Enter South Africa as the choice. Ask the program to list the exports of South Africa and then print out the list for future use.

3. Note the other facets of the South African economy such as literacy rates, urban vs. rural population, and per capita income. Suggest to the class that these items reflect on the South African economy.

4. Discuss the relationship of the geography and resources of South Africa. Explain the data base results in terms of South Africa's place on top of many strategic materials. This gives the country's economy added strength.

Summary:

1. What are the major natural resources of South Africa?
2. What is the geographical location of South Africa?
3. How are geography and the abundance of natural resources factors in the South African economy?
4. What were South Africa's ties to Europe and the European economy?

Homework:

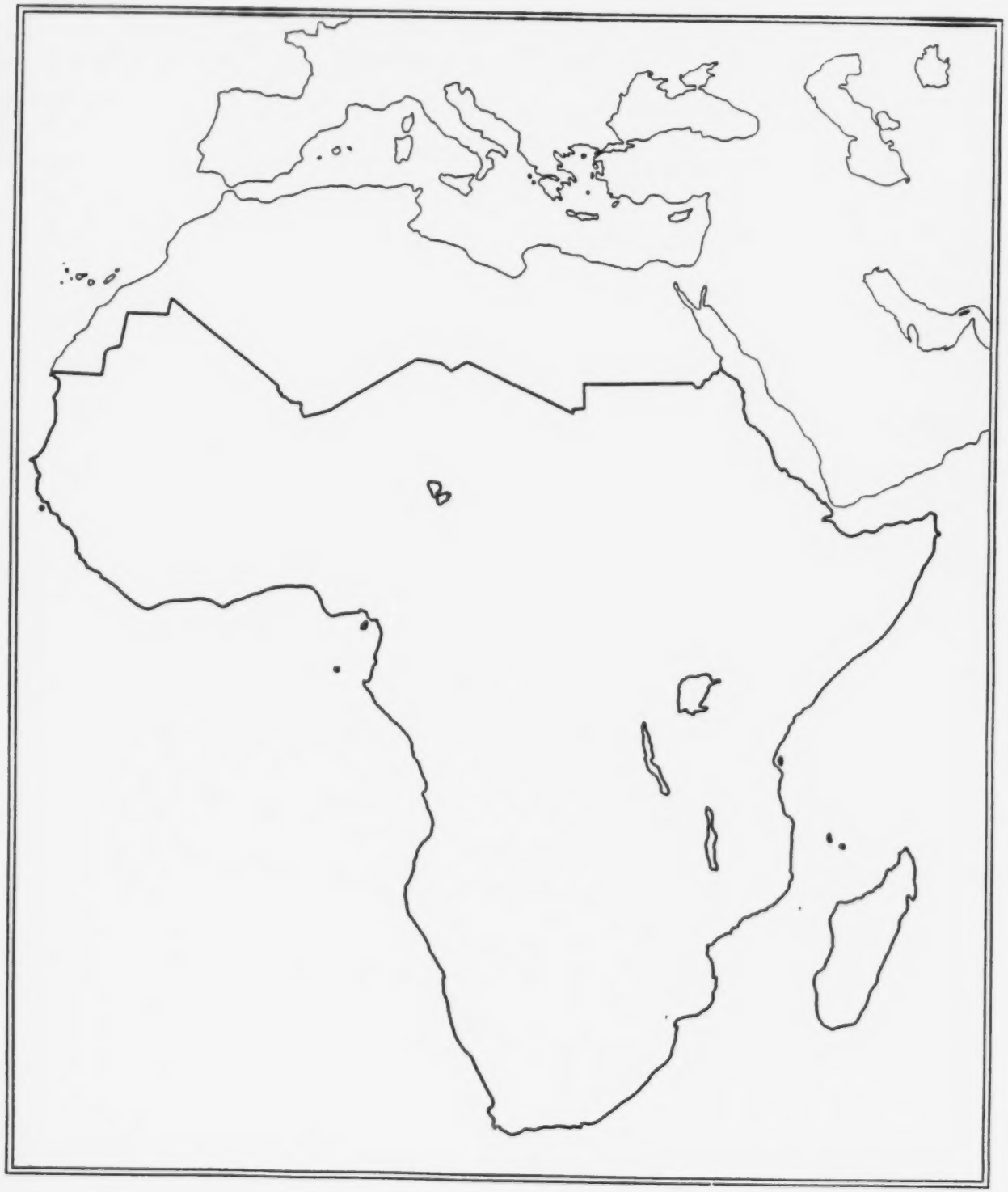
Draw a map of South Africa with the important natural resources listed on it. Include the borders with neighboring lands and the nearby oceans.

Enrichment:

1. Research the main trading partners South Africa has. What natural resources or manufactured goods are traded? Prepare a list for the class.

2. Define apartheid. Write a paragraph about the position you think our country should take regarding trade with South Africa.

NAME _____ CLASS _____ DATE _____



GEOGRAPHY OF ASIA

160

Topic 43: Land Usage In Asia

Aim: How much of Asia can be used for farming?

Performance Objectives: Students will be able to:

- analyze information contained in a data base
- calculate the actual arable land of a country when the total area and the per cent of arable land available are known
- compare countries according to arable land
- create a chart showing statistics about Asian countries
- illustrate statistical information using a bar graph

Materials:

- Apple II computer lab
- software: PFS File and Scholastic PFS Curriculum Databases: World Geography (GEO disk) by Scholastic
- worksheet entitled "Comparing Asian Countries"

Do Now:

How much land do you think is available in the U.S. for farming? Discuss the guesses of the students and compare them to the answer provided in the program.

Motivation:

There are many different sources of factual information. What are some of them? We often use an atlas, dictionary or encyclopedia. The computer age has given us another excellent source of information in the form of a data base. What does the term data base mean to you. Data bases are large storage places with information, usually in the form of numbers.

Development:

1. Today we are going to use one of these data bases. It contains information about all of the countries in the world. We are going to focus on only six Asian countries. We want to find some information about each of these countries.

2. Load the PFS File disk. Once the screen with several alternatives comes up, replace the PFS File disk with the other disk. Select choice 4 and then Press CONTROL and C at the same time. (This Program uses CONTROL and C as its main operating function.) You will then see what appears to be an outline of information. The cursor will be resting in the category COUNTRY. Type in the name China and press CONTROL and C at the same time. You will then see the same outline filled in with information about China. Use this information to complete the table below. You will also have to press CONTROL and N in order to get additional needed information. When you have finished getting the needed information on China press Escape. You will have to go back and repeat the same process to get to the other countries and information. Complete all the information on the table. Round off population figures to the nearest million. Allow students enough time to complete this activity.

4. As we said in the beginning, factual information can be presented in different ways. We have used a data base to complete a table. Now we are going to use the table to complete a bar graph. Using the information under the last column "Arable Land" we are going to create our bar graph on the worksheet. Demonstrate how to do this using China's 11%. Then ask students to complete the graph on their own.

Summary:

1. Which country has the largest area?
2. Which country has the greatest population density? Check the program.
3. Which country has the most available arable land? Space for calculations is provided on the worksheet. (To do this the students must multiply the percent of arable land by the area of the country.)

Homework:

Create your own bar graph showing population of the countries listed on the worksheet.

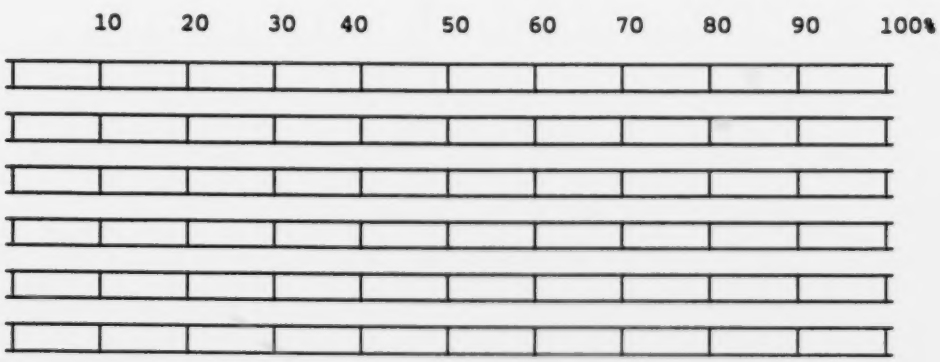
Enrichment:

Update the information in the PFS Database using the most current information available. The program gives sources of information to use.

Name _____ Class _____ Date _____

Comparing Asian Countries

Country	Area (sq. miles)	Population (Millions)	Arable Land (Per Cent)
China			
India			
Japan			
Mongolia			
Sri Lanka			
Vietnam			



Calculations

Topic 44: Asia: Data Base Information

Aim: How do Asian countries compare?

Performance Objectives: Students will be able to:

- create a table using data base information
- demonstrate ability to use a data base to find factual information
- state important facts about selected Asian countries

Do Now: List five countries that are in Asia.

Materials:

- Apple II computer lab
- software: Data Pursuits: Countries of the World by Grolier Educational Corp.
- student notebooks or folders

Motivation:

In what ways can computers help us? Discuss various practical applications of computers. Examples might include automatic bank machines for audits and word processing for students. How can computers help us to discover specific information about Asian countries?

Development:

1. Add to student responses the use of computer data bases. Data bases are another possible use for a computer. A data base is a collection of facts, usually containing many numbers. For example, you can list all the countries in the world and their populations. This could be an example of a data base. Whenever you wanted the information all you would have to do is push a few buttons and find the information very quickly.

2. Data bases are divided into records and fields. Our data base is about countries. Each country has its own record. Within the record we will find out facts about the country that are in fields.

3. Load the software. Answer N (no), when asked if you need instructions. Select level 3 (Free Search). Select choice 2 (Select records). Select 2 (Continent), then type in ASIA and finally press Return. Answer N to "Do you want to select by another field also?" Select Y to "Do you want to see all the fields in your selection?" You have just select 40 countries. Select option 1 (View selections). Press the space bar to go on to the next country and <-- button to go back to the previous country.

4. The teacher should select specific countries for the class as a whole or countries for groups or individuals. Students should copy the following table into their notebooks and complete the specific information for the countries assigned to them using the software. Allow enough time for the students to complete their tasks.

Country	Area	Population

Summary:

1. What country has the largest population? (Answers may differ depending on what countries the students have studied. Students will learn the correct one from their peers.)
2. What country has the largest area? (Answers may differ again.)
3. Ask questions that were given in the "Did you know?" category and allow students time to find the answers using the data base.

Homework:

Using the information in your table, write a paragraph describing Asian countries.

Enrichment:

Make your own data base on a country or countries in Asia with information from sources such as the almanac or encyclopedia.

Topic 45: Land And Water Forms (Asia)

Aim: What important land and water forms are found in Asia?

Performance Objectives: Students will be able to:

- define the most important land and water forms
- locate the important land and water forms in Asia
- evaluate the relationship of land and water forms to population

Materials:

- Apple II computer lab
- software: Map Skills Disks 1 and 2 by NYC Board of Education
- wall map of India (or Asia)
- worksheet entitled Asian Geography

Do Now:

What's the difference between an island and a lake?
What continent do we live on?

Motivation:

Land and water come in different shapes. We can classify some of these shapes and identify them. Mountains, hills, islands, lakes, are examples of these classifications. How would you describe the land form on which you live? What land forms would be interesting places in which to have your home?

Development:

1. In order to learn (or review) land and water forms we will be using the computer. Load the disk into the computer. Press Return when both title screens appear. Use up or down arrows to move cursor to NEW, then press Return. Type in your first and last name and press Return twice. Move cursor to choice 9 "Geographic Terms."

2. Follow the computer directions by reading the screens and pressing Return. Answer the questions by pressing Return after selecting the letter of the correct choice for each of the six questions. When you finish, shut off the computer.

3. Distribute the worksheet entitled Asian Geography.

4. Students should complete - from memory - as many blanks as they can on the worksheet. Review sheet and allow students time to make corrections and complete any that they did not know.

5. Students should determine what symbols they would like to designate for different types of land and water forms. The symbols should be written on the board and on the worksheet. Call volunteers to the wall map to assist students in filling in the map's legend.

6. Discuss the most important land and water forms in terms of how they affect people. For example, few people live in the Gobi Desert because of the limited resources. Another example is that people tend to live near water, either on the coasts or near rivers, because of the availability of food and transportation.

Summary:

1. What are the largest land and water forms called?
2. Islands and lakes are opposites (completely surrounded by water and land, respectively). What is the opposite of a peninsula? ocean?
3. What land forms discourage population the most? Why?
4. Why do people tend to live near rivers?

Homework:

1. What are China's most important rivers?
2. What is India's most sacred river?
3. What type of land form is Japan?
4. Why do most people in China live in the eastern half of the country?

Enrichment:

Prepare a geographic guide to Asia and list important facts about the land and water forms. For example, list the longest rivers and highest mountains.

Make a wall-sized map of Asia showing the important geographic features.

Name _____ Class _____ Date _____

Asian Geography

Key

cape continent coast island

isthmus mountain peninsula

---

bay delta gulf lake ocean

river sea strait

Land Forms

_____ - the largest land masses

_____ - land surrounded by water

_____ - land with water on three sides

_____ - land that rises high above the surrounding land

_____ - land next to the ocean

_____ - land stretching out into the sea

_____ - narrow land body of land connecting two larger masses of land

Water Forms

_____ - largest bodies of water

_____ - water nearly surrounded by land

_____ - a small part of an ocean protected by land around it

_____ - a narrow body of water connecting two larger bodies of water

_____ - a large body of water partly surrounded by land

_____ - a narrow body of flowing water

_____ - a wide area where a river empties into a larger body of water

_____ - a body of water surrounded by land

Topic 46: Southeast Asian Geography And Economy

Aim: What are the major economic powers of Southeast Asia and what are their important products?

Performance Objectives: Students will be able to:

- identify the countries of Southeast Asia
- identify the major products of each country
- describe the type of economy in each nation
- use a data base program on a computer

Materials:

- Apple or MS DOS computers
- software: One World Countries Database by Active Learning Systems
- dot matrix printer
- world map

Motivation:

About 15 years ago the United States was involved in an extended conflict in Southeast Asia. What is important about this area? Elicit from the students the idea that the region has important natural resources such as rubber, oil, sugar and rice. Many countries have colonized Southeast Asia, most notably the French and the Dutch. Why did the efforts of the United States and the colonial powers fail to hold the region? Should these countries determine their own future? Explain.

Development:

1. Locate the continent of Asia on the world map and point out the nations comprising Southeast Asia (Vietnam, Cambodia, Laos, Thailand, Burma, Indonesia, Malaysia, Singapore). What does the location of these countries contribute to their economies? What are their major exports?

2. Introduce the class to the data base program and explain that the program can be used to investigate many countries around the world in many different categories. Allow the students 10-15 minutes to explore the various menus.

3. Guide the class to the "Display a Country" choice and enter Vietnam. Note the important details of the country and have the printer make a copy of the data. Proceed to the Analysis section on the Main Menu. Enter imports and exports on the options screen. Also manufacturing and percentages of population in the urban and rural settings would be important. Print out the data.

4. Proceed with the other countries in Southeast Asia in the same manner. Print out all data.

5. Discuss the significance of the data to the economy and foreign policies of the U.S.

Summary:

1. What are the countries of Southeast Asia and what are their main products? State their similarities and differences.
2. What type of economy does each nation have?

Homework:

Trace a map of Southeast Asia and label it with the important natural resources for each country. Use the printouts from the data base program as a guide.

Enrichment:

1. Contact the government tourist office of one of the countries in Southeast Asia and request information on major exports. Compare this data with the data base findings.

2. Each country in Southeast Asia has its own complicated history, its own traditions and economy. Compare and contrast these three very different countries: Indonesia, Singapore, and Vietnam.

Topic 47: Locating Japan On The World Map

Aim: Where is Japan?

Performance Objectives: Students will be able to:

- locate Japan on a map of the world
- use a compass rose
- use longitude to compare distances from the equator
- use latitude to identify placement on a map

Materials:

- Apple IIe computer lab
- software: The Language of Maps - Series B, Location and Distance, disk 1 by Focus Microcomputer Software
- map of the world
- globe
- compass

Motivation:

Ask students which direction is north. Have students point to what they think is the northern wall of the classroom. Show students a magnetic compass. Demonstrate its use. Draw a diagram of the classroom with the northern wall on top. Have students point out the southern, western and eastern walls.

Development:

Draw and label a compass rose on the chalkboard. Have students refer to it when responding.

1. What is directly north of Japan on the world map? What is directly south? east? west?

2. What is northeast of Japan? southeast? northwest? southwest?

3. Have students locate the equator on the map. Is Japan north or south of the equator? Is Japan in the northern or southern hemisphere?

4. The distance from the equator is measured in degrees of latitude. What is the closest latitudinal line to Japan? What cities does 40 latitude cut through in the U.S.?

5. Ask students to point out the lines of longitude. Where is the line labeled 0° longitude? Is Japan east or west of this line? This line is called the prime meridian. Everything to the east of the prime meridian is in the eastern hemisphere. What hemisphere lies to the west of the prime meridian? What hemisphere is Japan in?

6. Advise students that the program they are about to use will provide the helpful information on using maps to make geographical locations.

7. Remind the students of the correct method for handling disks and tell them to insert disk 1 into drive "A". The students should turn on the monitors and computer power. The program is self-loading.

8. When the activity appears on the screen, direct students to follow computer instructions.

9. Allow the students a reasonable amount of time to complete the computer directed activity. Suggested time 15-20 minutes.

Summary:

1. In which hemisphere is Japan?
2. What do we call the line that separates the northern hemisphere and the southern hemisphere?
3. What does the prime meridian separate?
4. Is the United States east or west of the prime meridian?
5. What bodies of water surround Japan?
6. What countries are on the same line of latitude as Japan?

Homework:

On an outline map of the world:

1. Color in Japan.

2. In what direction would you travel to go from Japan to:
   a) Africa
   b) Russia
   c) South America
   d) Alaska

3. Draw routes on the map.

Enrichment:

1. Photocopy the shipping notices from the daily newspaper. How many ships come to New York from Japan? Draw the route a ship would take to get from Japan to New York.

2. Using an outline map, identify in different colors and name the four main islands of Japan.

Topic 48: Japan: Using Latitude

Aim: How does latitude affect Japan?

Performance Objectives: Students will be able to:

- compare latitude of the eastern coast of the U.S. with that of Japan
- define equator and parallels
- explain how latitude affects climate
- locate places using latitude

Materials:

- Apple II computer lab
- software: Map Skills Disk II by NYC Board of Education
- wall-sized maps of Japan (or Asia) and the world
- worksheet entitled "Japan and Latitude"
- student notebooks or folders

Do Now: List Japan's major islands and cities.

Motivation:

Latitude is the most important factor in determining climate. Ask students to react to this statement. Elicit possible other factors that influence climate. What geographic factors can sometimes affect climate as much as latitude?

Development:

1. In order to use latitude we must be sure that we understand what it is and how we can measure it.

2. In order to learn (or review) about latitude we will be using the computer. Load the disk into the computer. Press Return after each title screen appears. Use up or down arrows to move cursor to NEW, then Press Return. Type in your first and last name and press Return twice. Move cursor to choice 3 (Latitude).

3. Follow the computer directions by reading the screens and pressing Return. Answer the questions by pressing Return after selecting the letter of the correct choice for each of the six questions. When you finish shut off the computer.

4. When students are finished collect all disks.

5. Distribute the worksheet entitled Japan's latitude. Students should read the worksheet. They should make a chart in their notebooks or folders indicating where key Japanese and American cities are located using the diagram on the worksheet. Discuss the similarities (i.e. population density and agriculture) between the eastern coast of the United States and Japan. Review the answers.

Summary:

1. What part of the United States is most similar, in terms of climate and latitude, with Japan?
2. Why doesn't the equator have north or south after zero degrees?
3. In which Tropic is Japan located?

4. How does latitude affect climate?

Homework:

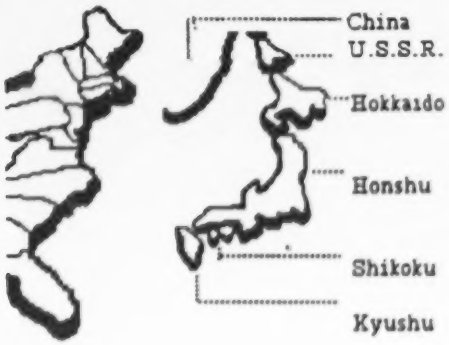
Why do fewer people live in northern Japan than in the central part of Japan?

Enrichment:

Analyze another Asian country in terms of its latitude and write a report on your findings.

Create a weather chart comparing cities in Japan and cities in the United States that have approximately the same latitude.

Name _____ Class _____ Date _____



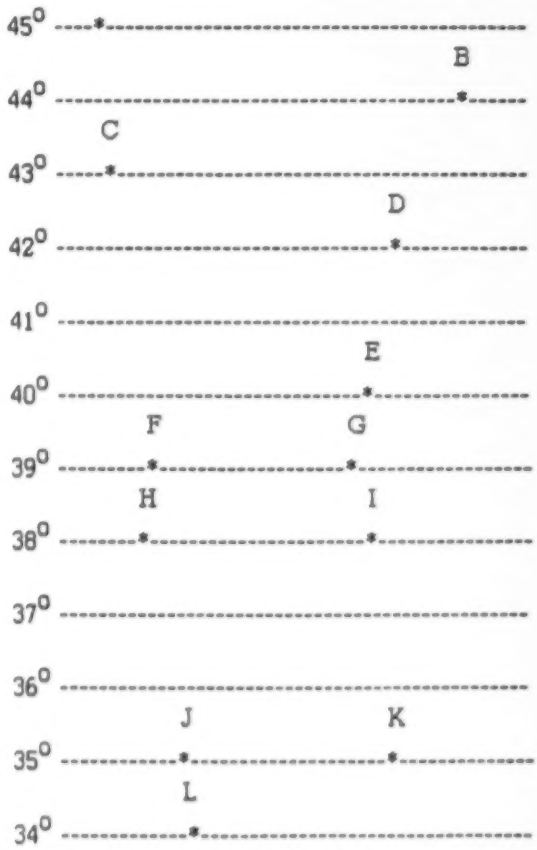
Japan and Latitude

Latitude

Latitude is the distance from the equator to a place. The world is divided into imagery lines parallel to the equator. These lines or parallels of latitude are measured in degrees, minutes and seconds. There are 90 degrees between the equator and each of the Poles. Each degree is divided into 60 minutes and each minute is divided into 60 seconds. For example New York City is 40 45'6"N - 40 degrees, 45 minutes, and 6 seconds north. Each point must have either north or south so that we know on which side of the equator the place is located.

Japan and Latitude

Latitude affects climate because the sun's rays are most direct at the equator. That's why the warmest parts of the earth are on or near the equator. The North and South Poles, the coldest parts of the earth, are farthest from the equator and receive the weakest rays. Hokkaido, Japan's northernmost island, has a colder climate than the rest of Japan. Most people live in the central and southern parts of Japan where the climate is milder. Japan corresponds with the eastern coast (between Maine and Georgia) of the United States in latitude and climate.



Japanese and *American* Cities

A) Wakkanai B) *Bangor* C) Sapporo D) *Boston*
E) *New York* F) Morioka G) *Philadelphia*

Topic 49: Topography Of Japan

Aim: What are the distinct topographical features of Japan?

Performance Objective: Students will be able to:

- read a topographical map
- identify the mountainous regions of Japan
- use Japan's topography to explain Japan's heavy emphasis on industrialization

Materials:

- Apple IIe computer lab
- software: The Language of Maps Series A, The Surface of the Earth Disk 2, by Focus Microcomputer Software
- physical map of Japan
- map of the world

Motivation:

The population of the United States is roughly 250 million
The population of Japan is roughly 120 million
Look at both countries on the world map. How would you compare the population densities of the two countries?

Development: Use the physical map of Japan

1. Where on the map are there mountains?
2. How much of Japan is mountainous?
3. Approximately what percent of Japan is flat enough for farming?
4. Do you think Japan grows enough food to feed all its people?
5. How do they get food?
6. Do you think food in Japan is expensive? Why?
7. How does Japan get money to buy food from other countries?
8. Advise students that the program they will view will provide helpful information on the effects of topography on Japanese life.
9. Remind the students of the correct method for handling disks and tell them to insert disk 3 into drive "A". The students should turn on the monitors and computer power. The program is self-loading
10. There is no menu. Direct students to follow instructions given by computer.
11. Allow the students a reasonable amount of time to complete the computer-directed activity and self-contained review. Suggested time is 15-20 minutes.

176

Summary:

Using the physical map of Japan

1. How would you characterize the topography of Japan?
2. Is Japan a densely-populated country? Explain.
3. How has this affected the way the Japanese earn their living?

Homework:

On an outline map of Japan, draw in:
1. Mountains of Japan
2. Lowlands of Japan

Enrichment:

1. Create a three-dimensional relief map of Japan. Suggested mediums: paper mache, clay, play-dough

2. Using clear acetate, outline the islands of Japan with a felt tip marker. Place this over a map of the United States to illustrate the relative size of both countries.

Topic 50: The Geography Of Japan: Historical Isolation

Aim: How has the geography of Japan affected its early history?

Performance Objectives: Students will be able to:

- locate Japan on a world map
- list three countries that are near Japan
- characterize the geography of Japan
- use the geography of Japan to explain its isolationism
- use the geography of Japan to explain the influence of China on early Japanese culture

Materials:

- Apple IIe computer lab
- software: The Language of Maps - Series A, disk 2, by Focus Microcomputer Software
- map of the world
- map of Asia

Motivation: Map of the world

How would an early visitor get to Japan? What kind of boat could they use? How would you describe Japan's most important geographic feature?

Development:

1. Japan is a series of islands. How are islands formed?

2. If the western half of the United States were flooded, would the tops of the Rocky Mountains become islands? Why?

3. We call strings of islands created by underground mountains archipelagoes. Look at the map. Do you think Japan is an archipelago? Why?

4. Japan is an archipelago. We said before that in early times one could get to Japan only by boat. Do you think earliest Japan had a lot of strangers wandering in? Why?

5. Advise students that the program they are about to use will help them to understand the relationship of geography to Japanese history. Remind the students of the correct method for handling disks and tell them to insert disk 2 into drive 1. The program is self-loading.

6. Allow the students a reasonable amount of time to complete the computer-directed activity and self-contained review. Suggested time is 15-20 minutes.

Summary:

1. What do we call a string of islands formed by underground mountains?
2. Why do we describe Japan's early history as "isolationist?"
3. How did Japan's geography contribute to this isolationism?
4. Why did China, and not other countries, have an impact on Japanese culture?
5. What country was most likely to send people to Japan? Why?
6. What are the similarities between Japanese and Chinese culture?

Homework:

1. If Japan were not an island country, do you think it would still have isolated itself from the rest of the world? Explain.

2. How has modern transportation affected Japan's present position as a world leader?

3. Do you think present day Japan feels threatened by the spread of communism in Southeast Asia? Use Japan's geography to explain your answer.

Enrichment:

1. Compare the culture of Japan to the culture of China. Be sure to include language, religion, food, art and family life. How are they the same? How are they different?

2. What impact is American culture having on the young people of Japan? (Use current periodicals in the library for your answer.)

Topic 51: Geography Of Japan: Scale Of Distance And Map Legends

Aim: How do scales of distance and legends help us interpret maps?

Performance Objectives: Students will be able to:

- interpret symbols on a map using the map legend
- estimate distances between locations on a map using the map's scale of distance
- explain that map key and map legend are interchangeable terms and that keys often explain abbreviations used on a map as well as symbols
- use information gained from a map legend to form a judgment about a country

Materials:

- MS DOS computer lab
- software: Map Skills by NYC Board of Education
- handout sheet "Map of Japan"

Motivation:

Draw the following symbols on the chalkboard:

Ask students to identify these symbols. "Why did you recognize these symbols? Why are symbols an easy way to express information?" Discuss the other uses of symbols (i.e., poison warning, etc.) "How are symbols used on maps? Where on a map would you find the symbols and their meaning?"

Development:

1. Explain how map legends, or keys, contain symbols to express information on a map. Note that distance on a map is shown through the use of a scale of distance. Draw a scale of distance on the chalkboard. Explain how to use it.

2. Instruct students that the Map Skills program will teach them about map symbols and scale of distance in modules 5 and 6 by using readings, diagrams, and multiple-choice questions. During the program, students should take notes.

3. To start program, insert DOS diskettes into disk drive A and turn on the computer and monitor. When the screen asks for the date and time, press the ENTER key. When A> and a blinking cursor appear on the screen, type in BASICA, remove the DOS diskette and insert "Map Skills" into disk drive A. Press F3 key. The screen will display LOAD". Type in SSCAI and press ENTER. When the screen displays OK for the second time, press the F2 key. After the first three screens are viewed, type i or t and press ENTER. When the menu appears, students' names may be typed to record individual performances.

4. After module 5 is completed, students should return to menu, select module 6 and complete that selection.

5. Allow students 10 to 15 minutes to complete computer-directed activities and self-contained review.

Summary:

1. What is a scale of distance? What simple tool helps you use a scale of distance on a map?
2. What are the two ways of writing a scale of distance? How do scales of distance vary on a world map as compared to a map of Japan?
3. What is contained in a map legend? Using the student text or atlas identify legends that include: size of cities, products, elevation, rainfall.
4. What can map symbols tell you about a geographic area? What symbols would you use on a map of your home borough?
5. What is the purpose of a map key? Draw a map key that uses both symbols and abbreviations.

Homework:

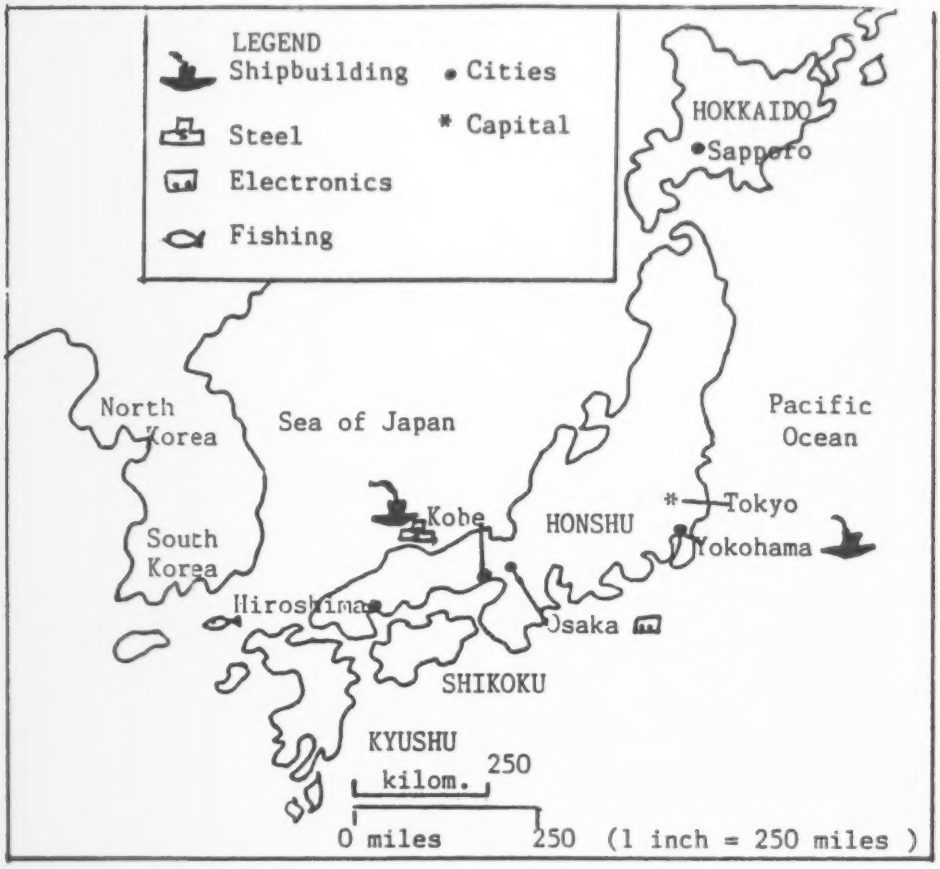
Prepare individual copies of the Map of Japan sheet. Distribute these to students. Have students answer the ten questions.

Enrichment:

Using your text, find a land use map of East Asia. Trade between the U.S. and all parts of East Asia has increased tremendously in recent years. Have students look for examples of products from Japan, China, Korea, Hong Kong, Singapore, Macau, and Taiwan. Have them draw symbols of the products from each country.

Map Of Japan

DIRECTIONS: Use the map to answer the questions below.



1. The capital of Japan is _____
2. Shipbuilding is an occupation in which two Japanese cities?
3. How far is it in miles from Tokyo to Sapporo? in kilometers?
4. What is a main industry in Osaka?
5. What is an industry in Hiroshima?
6. What is the distance between Hiroshima and Tokyo?
7. What is the distance in miles from Osaka to Sapporo?
8. What are two of the main industries in Kobe?
9. How many islands make up Japan?
10. What can you infer about about the Japanese economy from the map legend?

Topic 52: Reviewing The Geography Of Japan

Aim: What have we learned about the geography of Japan?

Performance Objectives: Students will be able to:

- locate Japan on a map of the world
- locate and name the capital city
- locate and name three additional major cities of Japan
- name three major crops
- name three natural resources
- draw a rough representation of Japan

Material:

- Apple IIe computer lab
- Software: Matchmaker World Geography Facts by American Educational Computers Inc.
- map of the world
- map of Japan

Motivation: Map of the world

Locate Japan on the map. What are some important geographic characteristics of Japan?

Development: Map of Japan

1. How would you characterize the topography of Japan?

2. Locate the capital of Japan. How is it shown on the map?

3. Locate three other large cities. How does the map tell us these are large cities?

4. What kinds of food do you think of when you think of Japanese food?

5. Japan's chief crops are tea, rice and silk. What is silk used for?

6. Advise students that the program they will use will provide interesting information about Japan. Remind students of the correct method for handling disks and tell them to insert disk into drive A. The program is self-loading.

7. When the menu appears on the screen, instruct the students to select activity number 29.

8. Allow the students a reasonable amount of time to complete the computer directed activity and self contained review. Suggested time is 10-15 minutes.

Summary:

1. What is the capital of Japan?
2. What are three other large cities in Japan?
3. What are the important crops of Japan?
4. What are three natural resources of Japan?
5. What are three countries near Japan?
6. What are the bodies of water that surround Japan?

7. Why is fishing an important industry in Japan?
8. Why is Japan known as a manufacturing country?
9. What does Japan manufacture?
10. How would you characterize the geography and topography of Japan?

Homework:

Draw a map of the Japanese islands. Use symbols to show:

1. the capital city
2. three other important cities
3. three crops grown in Japan
4. three natural resources of Japan

Enrichment:

1. Using the daily newspaper clip five advertisements for products produced in Japan. Explain why American businesses are threatened by Japanese goods.

2. Ask students to make a list of Japanese products they have at home. Why did the student or his/her parent select the product that was made in Japan?

Topic 53: Map Study Of China: Population, Cities, Topography, And Ethnic Groups

Aim: How can maps be used as tools to learn about modern China?

Performance Objectives: Students will be able to:

- compare population density of eastern and western China
- draw a conclusion about the pattern of population distribution and its effects on China
- recall the names and locations of the major Chinese cities, including the Wade-Giles and Pinyin spellings
- discuss the topographical features which isolated China and the effect on its historical and cultural development
- identify the major ethnic groups of China and locate them on a map

Materials:

- Apple II computer lab
- Software: China: Three Thousand Years by Focus Media, Part 3: Geography of China

Do Now:

Write on board:
Define population density, topography, and ethnic group. Elicit answers and discuss definitions.

Motivation:

Write on board:
"Maps are only for finding directions." Do you agree or disagree? Explain. Elicit answers. Discuss the various kinds of maps that contain specialized information. What is the key to reading a map representation? Discuss use of map legends.

Development:

1. Explain that the computer program, "Geography of China," consists of four sections which will present four different maps: Population Distribution, Cities, Topography, and Ethnic Groups.

2. Instruct students to take notes on each map. Challenge students to gain as much information as they can from the individual maps.

3. With the computer off, insert disk into disk drive 1 and close door. Turn on computer and monitor. If using an Apple IIe or IIc, put CAPS Lock key in down position. When MENU appears, select Option (3), press RETURN, then select A. After each map appears on the screen, press RETURN to go on to sections B, C, and D.

4. Students will progress at their own rates. Allow 20 to 30 minutes for completion. If the study guides were distributed, more time may be needed.

5. The teacher will review the material covered in the program through the summary questions.

Summary:

1. Why is China's population more crowded in the eastern part of the country?
2. What factors most likely contribute to the western part of China being less densely populated?
3. Why is Taiwan densely populated?
4. What pattern of urban development can you see in the location of China's main cities? How can you explain this?
5. Which cities would most likely have a mild climate? a cold climate?
6. What factors have contributed to the growth of Shanghai?
7. What is the Pinyin name for Peking? Why have most newspapers and magazines in the United States switched from the Wade-Giles spelling of Chinese names and places to the Pinyin version? What impact will this have on maps?
8. What do the two blue lines represent on the topographical map of China? Why are they important?
9. How did the mountain ranges and deserts affect China's physical and cultural development?
10. Why would farming be less difficult in eastern China?
11. What conclusion can you draw by comparing the Population Distribution and Topography maps of China?
12. Which ethnic group inhabits most of eastern China? Why do you think this came about?
13. Where do the Kazak people live? the Mongols? the Uygur?

Homework:

1. Use an atlas, almanac or encyclopedia to compare the map of the major ethnic groups of China with a similar map of the United States. On a sheet of paper, list the differences and the similarities.

2. Compare the population distribution map of China with a similar map of the United States. List the differences and similarities on the same paper.

3. Write a paragraph to explain the conclusions you reached by comparing both sets of maps.

Enrichment:

Write a research paper on the ethnic minorites in China, including their origins, locations, cultures, and assimilation into Chinese society.

Topic 54: Geography Of China

Aim: How does China's geography affect the lives of its people?

Performance Objectives: Students will be able to:

- create a geographic map of China
- define key geographic terms
- evaluate how geography affects population
- identify and locate China's key land and water forms

Materials:

- Apple II computer lab
- software: History of Asia and Africa software by Focus Media
- worksheet entitled Chinese Geography
- wall-sized map of China (or East Asia)

Do Now:

What types of land and water forms do we live near?

Discuss the types of land and water forms that we live on or near. For example, New York City is on the Hudson River and borders on the Atlantic Ocean

Motivation:

Elicit the reasons why people live where they do - transportation, relatives, geography, climate, etc. Is there a place that you would rather live.

Development:

1. Geography greatly affects where the people in China live. Today we are going to be using the computer to help us find out more about Chinese geography.

2. Students will be using choice #3 - Geography of China. This choice presents four maps that students will use to complete the worksheet. The worksheet is self-contained. It gives the directions to load the disk and select choice #3. Distribute the sheets and allow the students enough time to do the activities. Check the progress of the students individually.

3. Discuss the answers to the questions when everyone has finished.

4. Elicit reasons why most Chinese people live in the central eastern region of China.

Summary:

1. Why do few people live in Gobi Desert?
2. Why do people live near rivers in China?
3. What are China's most important rivers?
4. What large Chinese cities are located near rivers?
5. When geography wasn't enough, how did the Chinese try to enhance their geography to stop invaders?

Homework:

Color in the countries that border on China. Add the color code to the legend of the map on the worksheet. Why is it possible for modern cities to be built far away from rivers?

Enrichment:

Create a wall sized map of China showing land and water forms. In a report, compare how land and water forms affect people in different countries.

Name _____ Class _____ Date _____

Geography Of China

Legend

Mountain ///////

Plateau \\\\\\\\\

River --------

Desert <<<<<

1. Load the disk into the computer.

2. Select choice #3 - Geography of China.

3. You will then be asked which of your maps you want to see. Each map will be useful in completing the activities on this page. Complete the map by following directions 4 and 5. For questions 6-9, use the correct map(s) to answer the questions.

4. Mark off the Yellow River, Gobi Desert, Tibetan Plateau and the Himalayas. Use the map's legend to find the correct symbols to use.

5. Place a dot on the map where the following cities are located. Indicate the letter of each city on the map.
   The cities to locate are:
   A) Mukden
   B) Tientsin
   C) Canton
   D) Beijing
   E) Chunking

6. The Talka Makan _____ are located in the _____ part in China.

7. Most Chinese people live in the _____ half of the country.

8. The _____, a major ethnic Chinese group came from the _____ part of China.

9. The _____ and the_____ come from the northwestern part of China.

Topic 55: Map Directions: Locating Chinese Cities

Aim: How do we use directions to locate Chinese cities?

Performance Objectives: Students will be able to:

- apply knowledge of primary and intermediate directions to a map of China
- identify the primary and intermediate directions
- locate points on a map solely through the use of directions

Materials:

- Apple II computer lab
- software: Map Skills Disk 2 by NYC Board of Education
- wall-sized map of Asia
- worksheet entitled Chinese Cities
- student notebooks or folders

Do Now:

In what part of China is Beijing located?
Elicit and discuss the answer.

Motivation:

Using the wall-sized map of Asia, ask the students to describe where China is located. Allow several students to respond. Explain that we normally use words like up or down, left or right to describe most locations, BUT on a map we use a special set of words called directions.

Development:

1. Ask students how many different directions there are. Explain that in addition to the most common eight directions (N, E, S, W, NE, NW, SE, and SW), there are many more. However, if you know the basic eight you should have no trouble becoming a master map direction reader.

2. In order to learn (or review) what the directions are, we will be using the computer. Load the disk into the computer. Press Return when both title screens appear. Use up or down arrows to move cursor to NEW, then press Return. Type in your first and last name and press Return twice. Move cursor to choice 1 (Compass Directions).

3. Follow the computer directions by reading the screens and pressing Return. Answer the questions when you reach "Check Your Understanding." by pressing Return after selecting the letter of the correct choice for each of the six questions. When you finish move the cursor to your name using the arrows. Press Return twice and move cursor to Intermediate Directions. Continue as you did before until you complete the six additional questions on intermediate compass directions. When you finish shut off the computer.

4. When students are finished, collect all disks.

5. Distribute the worksheet entitled "Chinese Cities."

6. Tell each student to use the information on directions to fill in the blanks on the worksheet. (Put away the wall-sized map of Asia.)

Summary:

1. In which direction does the Yellow River flow?
2. If you were going from Beijing to Wuhan in which direction would you be going?
3. If you were traveling from China to Japan, in which direction would you be going?
4. Ask for a volunteer to complete the primary directions on a directional written on the blackboard. Ask for another student to complete the intermediate directions.
5. Write the following diagram on the board and use it to play the game called Find the Moving Dot. Students may copy the diagram in their notebooks or on the back of the worksheet. The game is played by the teacher telling the students that we are going to start at Point A and then move along to a final point (destination). In order to get to the final destination you must follow directions. Begin by saying go one dot east and one dot south. Where are we? Most students will get the correct answer of G. Start over again and use primary directions only for the initial *practice* runs. Then add Intermediate directions as the students find it easier. Progressively give directions more quickly. If students complain that they can't keep track explain that when you are traveling in a car and see a sign you must know where you want to go right away or you will miss your turn.

*	*	*	*	*
A	B	C	D	E
*	*	*	*	*
F	G	H	I	J
*	*	*	*	*
K	L	M	N	O
*	*	*	*	*
P	Q		S	T
*	*	*	*	*
U	V	W	X	Y

Homework:

1. Draw and label a directional.
2. What are the primary directions?
3. What are the intermediate directions?

Enrichment:

Create a wall-sized directional for display in the class room. Draw a map of your room, block or school and include a directional on it.

Name _____ Class _____ Date _____

Chinese Cities

A. Beijing
B. Tientsin
C. Nanking
D. Canton
E. Chungking
F. Foochow
1. Hwang Ho River
2. Yangtze River
3. Sui River

From	To	Direction
Beijing	Tientsin	_____
Canton	Chungking	_____
Nanking	Beijing	_____
Chungking	Beijing	_____
Foochow	Chungking	_____
Foochow	Canton	_____

Topic 56: China: Map Legends

Aim: What are China's largest cities?

Performance Objectives: Students will be able to:

- create a map of China showing major cities and their populations
- define legend and key
- demonstrate ability to use a map's legend or key

Materials:

- Apple II computer lab
- software: Map Skills Disks 1 and 2 by NYC Board of Education
- wall-sized map of China (or Asia)
- worksheet entitled Cities in China
- student notebooks or folders

Do Now: Unscramble the following words.

1. HINAC
2. DEEGNL
3. YEK

Motivation:

We can describe facts in many ways. Words, pictures and symbols are some ways of describing them. Maps are fascinating ways to find information. However, we must know the "secrets" of the map that we are using. Symbols are used on a map to represent different things. The symbols are defined on the part of the map that is called a legend or key. What is a symbol? What other types of symbols can you think of?

Development:

1. Point out the key or legend on the wall-sized map.

2. In order to learn (or review) legends or keys, we will be using the computer. Load the disk into the computer. Press Return when both title screens appear. Use up or down arrows to move cursor to NEW, then press Return. Type in your first and last name and press Return twice. Move cursor to choice 2 (Legends).

3. Follow the computer directions by reading the screens and pressing Return. Answer the questions by pressing Return after selecting the letter of the correct choice for each of the six questions. When you finish, shut off the computer.

4. Distribute the worksheet entitled Cities in China.

5. Tell students that the class will be making a map showing the cities in China. The map will also show approximately how many people there are in the cities. Point out the list of cities on the worksheet. Ask students to devise a classification system that they may be able to use. For example, cities can be divided as follows: More than 5 million people, from 1 to 5 million people, less than 1 million people, less than 500,000 people. For each category a symbol (i.e. * for 5 million, + for 1 million, etc.) must be selected.

6. Students should then complete the map by placing the symbols in the appropriate places. Volunteers could be used to go to the wall-sized map to assist in identifying where the cities are actually located. The city of Chendu is not indicated on the map. A student or students can find this city.

Summary:

1. What is the purpose of a map's legend?
2. What is another name for legend?
3. Which Chinese cities have more than five million people?

Homework:

1. Which city, close to the Hsi River has about five million people? (Canton)

2. In what section of China do most of the people live?

3. Using colored pens or pencils, color in China's neighbors. Add the colors to the map's key.

Enrichment:

Create an atlas of China using maps that show different types of legends.

Name _____ Class _____ Date _____

Cities In China

Key

City	Population
Shanghai	12,000,000
Beijing	8,500,000
Tianjin	7,200'000
Canton	5,200,000
Shenyang	4,800,000
Wuhan	4,400,000
Chendu	4,000,000

City	Symbol
Shanghai	
Beijing	
Tianjin	
Canton	
Shenyang	
Wuhan	
Chendu	

Topic 57: India: Using Latitude And Longitude

Aim: How do we locate places in India using latitude and longitude?

Performance Objectives: Students will be able to:

- define latitude, longitude, equator, Prime Meridian, and Tropics
- explain how places can be located using latitude and longitude
- locate places in India using latitude and longitude

Materials:

- Apple II computer lab
- software: Map Skills Disks 1 and 2 by NYC Board of Education
- wall-sized map of India (or Asia)
- worksheet entitled India
- student notebooks or folders

Do Now:

Unscramble the following words.

A. 1. LGNOITDUE
   2. PMA
   3. GREEDES
   4. QUETOAR

B. 1. On what continent is India located?
   2. Name the countries that border on India.
   3. What body of water bears India's name?

Motivation:

How do ships that are damaged while out on the sea get help? They can be found because of a system in which the world is divided into an imaginary grid with lines going north/south and east/west. The lines are called latitude and longitude.

Development:

1. The computer is going to help us learn how to use these lines to find places in India.

2. Load disk 2 into the computer. Press Return when both title screens appear. Use up or down arrows to move cursor to NEW, then press Return. Type in your first and last name and press Return twice. Move cursor to choice 1 (Longitude).

3. Follow the computer directions by reading the screens and pressing Return. Answer the questions when you reach "Checking Your Understanding," by pressing Return after selecting the letter of the correct choice for each of the six questions. When you finish, shut off the computer. Replace disk 2 with disk 1 and load the computer. Repeat the same process as above until you reach the choices. Then select choice 3 (Latitude). Follow the computer directions again until you reach the end of the questions. When you finish, turn off the computer.

4. Distribute the worksheet entitled India.

5. Ask one or more volunteers to come to the board map to assist the class in filling in the numbers for the lines of latitude and longitude. Students should then be asked to locate the city of New Delhi - using latitude and longitude. Answers must include a number, the symbol for degrees and a direction for latitude or longitude. Explain that latitude comes before longitude because this is the universally accepted method of notation. Answers should be approximate.

6. Students should then complete the table on the worksheet.

Summary:

1. What is the difference between latitude and longitude?
2. What do we call zero degrees latitude? longitude?
3. Explain how ships give their location while at sea?
4. Ask students to add the names and locations of two other cities on the blanks provided and have the students fill in letters on the maps for them.

Homework:

Use the worksheet to complete this assignment.

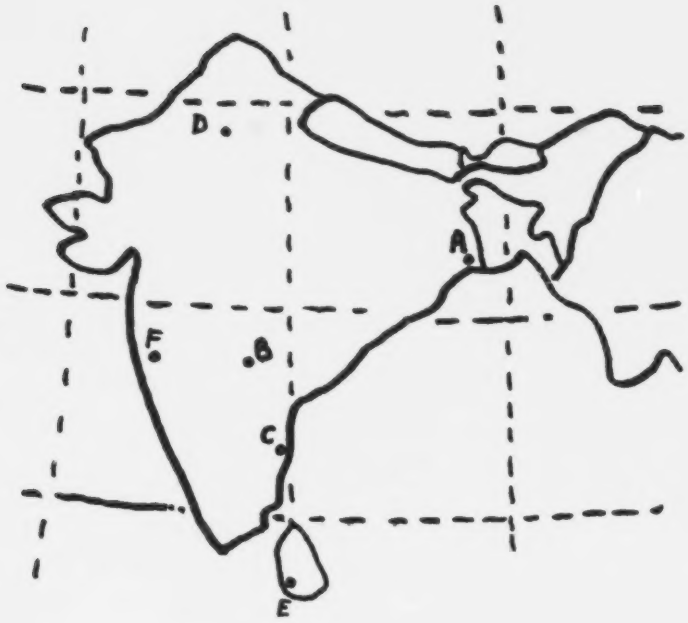
1. Which of the cities is the one that is most northeast?
2. What is the latitude of the southernmost Indian city?
3. Which Indian city is the closest to the Prime Meridian?

Enrichment:

Locate 10 other cities in India using latitude and longitude. Find cities in different countries that share the same latitude or longitude.

Name _____ Class _____ Date _____

India



A. Calcutta
B. Hyderabad
C. Madras
D. New Delhi
E. Colombo (Sri Lanka)
F. Bombay

City	Latitude	Longitude
Calcutta	_____	_____
Hyderabad	_____	_____
Madras	_____	_____
New Delhi	_____	_____
Colombo (Sri Lanka)	_____	_____
Bombay	_____	_____
_____	_____	_____
_____	_____	_____

Topic 58: India: Measuring Distances On A Map

Aim: How do we measure distances between points in India?

Performance Objectives: Students will be able to:

- define scale, miles and nautical miles
- demonstrate ability to use a map's scale
- make a "working ruler" out of paper
- measure distances between Indian cities

Materials:

- Apple II computer lab
- software: Map Skills Disks 1 and 2 by NYC Board of Education
- wall-sized map of India (or Asia)
- worksheet entitled India: How far away are they?

Vocabulary: nautical, meter, kilometer

Do Now:

Which is greater - one mile or one kilometer? Explain.
How can we use a map to measure the distance between two points?

Motivation:

What does the word scale usually mean to you? What does it measure?
What do you suppose the scale on a map measures?

Development:

1. Ask students what the unit of measure is for measuring a piece of paper, a room and a continent. Explain that we vary the units of measure (inches, feet or yards, and miles, respectively) to fit the specific situation. Maps usually use miles (5,280 feet) but some maps may use other units of measure such as kilometers (a kilometer equals .62 miles) or nautical miles (about 6,076 feet).

2. In order to learn (or review) how to use a map's scale we will be using the computer. Load the disk into the computer. Press Return when both title screens appear. Use up or down arrows to move cursor to NEW, then press Return. Type in your first and last name and press Return twice. Move cursor to choice 7 (Map Scale).

3. Follow the computer directions by reading the screens and pressing Return. Answer the questions by pressing Return after selecting the letter of the correct choice for each of the six questions. When you finish, shut off the computer.

4. Distribute the worksheet entitled India: How far away are they?

5. Before the scale is used, students must first identify the appropriate cities. The cities are listed with the letters from A to F on the bottom on the sheet. Only dots are indicated on the map. Ask volunteers to go to the wall-sized map and identify the cities. Students can then write the letters in the correct places on their maps.

6. Utilizing the mileage scale we are going to measure the distances between these points. Using the edge of a piece of scrap paper have the students create a ruler that corresponds to the scale. Mark off each point and then write the number of miles that it represents. This "ruler" is now used to measure the distances between the places. Students should now measure the distances and record their answers on the spaces.

Summary:

1. How does a mileage scale from the scale in your home?
2. If you were traveling between Madras and New Delhi, how far would you have to go round trip?
3. If you were preparing a map of your home (neighborhood, city) what unit of measure would you use. Explain.

Homework:

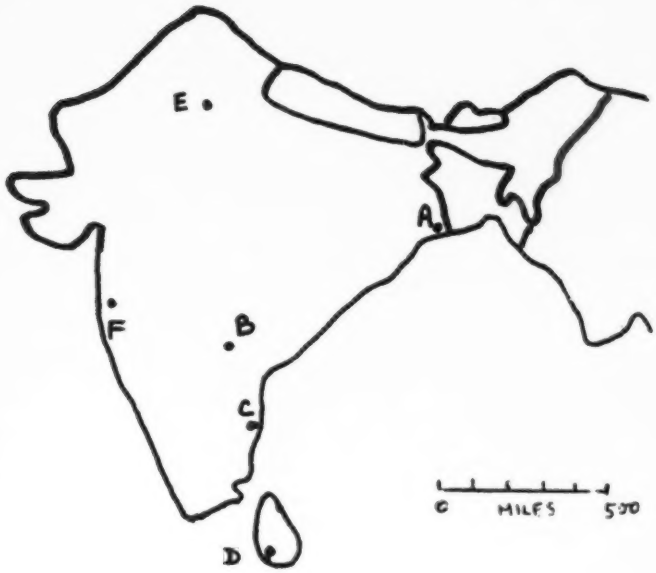
1. If you were traveling around the borders of India, how far would you go?
2. From north to south, how long is India?
3. What is the approximate distance in kilometers, between Madras and New Delhi?

Enrichment:

Prepare a mileage chart showing the distances between key cities in Asia.

Name _____ Class _____ Date _____

India: How Far Are They?



A. Calcutta
B. Hyderabad
C. Madras
D. Colombo (Sri Lanka)
E. New Delhi
F. Bombay

From	To	Distance
Calcutta	Colombo	_____
Madras	Calcutta	_____
Colombo	New Delhi	_____
Madras	Calcutta	_____
Calcutta	New Delhi	_____

Topic 59: Locating The Middle East

Aim: Where is the Middle East?

Performance Objectives: Students will be able to:

- locate the Middle East on a world map
- use a compass rose
- use longitude to compare distances from the equator
- use latitude to identify placement on a map

Materials:

- Apple IIe computer lab
- software: The Language of Maps - Series B, disk 1, by Focus Microcomputer software
- map of the world
- globe

Motivation: Globe and Map

Have students locate the Middle East on the globe and then on the world map. How is the globe different from the map? Which is a truer representation of the world? Why?

Development:

Draw and label a compass rose on the board. Have students refer to it when responding.

1. What is directly north of the Middle East on the world map? What is directly south, east, northeast, southeast, northwest, southwest?

2. Have students locate the equator on the map. Is the Middle East north or south of the equator? The equator divides the world into the northern and and southern hemispheres. Is the Middle East in the northern or southern hemisphere?

3. The distance from the equator is measured in degrees of latitude. What degree of latitude goes through the Middle East? What part of the United States does 30 north latitude pass through?

4. Ask students to point out the lines of longitude. Where is the line labeled 0 longitude? This line is called the prime meridian. Is the Middle East, east or west of this line?

5. The prime meridian divides the world into the eastern hemisphere and the western hemisphere. In what hemisphere is most of the Middle East located?

6. Advise students that the program they will use will help them to extend their understanding of the Middle East through better map skills. Remind the students of the correct method for handling disks and tell them to insert disk 1 into drive A. The program is self-loading.

7. Allow the students a reasonable amount of time to complete the computer directed activity. Suggested time is 15-20 minutes.

Summary:

1. In which hemisphere is most of the Middle East located?
2. What do we call the line that separates the northern and southern hemispheres?
3. What does the prime meridian separate?
4. Is the Middle East in the northern or southern hemisphere?
5. What does a compass rose tell us?
6. What bodies of water touch the Middle East?
7. On what continent is the Middle East primarily located?

Homework:

1. In which direction would you travel to go from the Middle East to:
   a) France
   b) India
   c) North America
   d) Moscow

2. List four Middle Eastern countries that have common borders. Write the direction of each one from the others.

Enrichment:

1. Using a current map of the Middle East identify in a legend Middle East "hot spots":

Golan Heights	Persian Gulf
West Bank	Iran-Iraq border
Gaza Strip	Suez Canal
Beirut	

2. Set up a table, listing each of these locations horizontally across the top and vertically on the left side. Enter the direction that each location lies from the other in the intersecting boxes.

Topic 60: Middle East Overview

Aim: What are the most important people, places and things in the Middle East?

Performance Objectives: Students will be able to:

- cite the most important people, places and things related to the Middle East
- create an outline on the Middle East using information from a test
- define Zionism and Imam
- locate the Aswan Dam, Golan Heights, Lebanon, Yemen, and Jerusalem on a map

Materials:

- Apple II computer lab
- software: World History on Computer Series by Focus Media
- map of the Middle East and/or World

Do Now:

Where is the Middle East? How did it get its name? Name five countries in that area.

Motivation:

The tragic, unending fighting in the Middle East is in the news every day. The situation is very important to the U.S. What are some of the people, places and things that make it special.

Development:

1. Elicit that the region is in the middle of Europe, Asia and Africa and is east of Europe but not as far east as some parts of Asia.

2. Advise students that the program they will use will help them to understand the region better. The format that it uses is that of a test which helps them to complete an outline.

3. Load disk into the computer. Answer the preparatory questions so that you do not want sound, you want answers only, you will work alone, you will answer 20 questions, and then type in your own name. Answer the questions and follow the instructions on going from one question to the next. The computer will assist you in finding the correct answers.

4. The answers to the computer-generated questions will provide the answers for the blanks on the outline. Allow students enough time to go through the questions and fill in the outline.

5. Review the outline and discuss any questions that the students found particularly interesting or difficult. (The questions and answers are given in the program's instruction manual.)

6. Ask students for any items that they feel should have been added to the outline to make it more complete. For example, you could update the names of the present leaders of key Middle Eastern countries.

Summary:

1. Who is the most important person from Iran that was mentioned in the questions? Explain why you choose that person.
2. What important places were fought over in the Middle East? Locate them on the map.
3. What is the P.L.O.?
4. What is the equivalent of Imam in other countries? Give examples.
5. Who were the people in favor of and against the concept of Zionism? Why?
6. Have students locate the following places on the map: Golan Heights, Lebanon, Yemen and Palestine.

Homework:

Write a paragraph using each of the three sub-topics in the outline.

Enrichment:

Research information about Yemen. Who is the Imam today? How does it fit in with the other Middle Eastern countries politically? Is it an oil producing nation? How does the United States get along with Yemen? Report on your findings.

Topic 61: The Topography Of The Middle East

Aim: What are the distinct topographical features of the Middle East?

Performance Objectives: Students will be able to:

- interpret a topographical map
- identify the desert regions of the Middle East
- use the topography of the Middle East to explain the nomadic nature of the people of the Middle East

Materials:

- Apple IIe computer lab
- software: The Language of Maps - Series A, disk 2, Focus Microcomputer Software
- physical map of the Middle East
- map of the world

Motivation: Map of the world

Where is the Middle East on the map? What continent is it on? Is it near the equator? Is it warm or cold? Is it mountainous or flat?

Development: With the physical map of the Middle East

1. How are deserts shown on the map? Refer the students to the key
2. How much of the Middle East is desert?
3. Can you farm in a desert?
4. What natural resource is most important for survival and farming?
5. Can water be found in the desert? Explain.
6. What do the inhabitants do when one place runs out of water?
7. We call people who travel about nomadic people. Some of the people of the Middle East are nomadic. Why?
8. Remind the students of the correct method for handling disks and tell them to insert disk 3 into drive "A." The students should turn on the monitors and computer drive power. The program is self-loading
9. There is no menu. Direct students to follow the instructions given by the computer.
10. Allow the students a reasonable amount of time to complete the computer directed activity. Suggested time is 15-20 minutes.

Summary:

1. How would you characterize the topography of the Middle East?
2. How has the topography of the Middle East affected the way its people live?
3. What are nomadic people? Where else in the world have nomads lived?

Homework:

Distribute copies of an outline map of the Middle East. Have students use it to label the deserts and the countries in which they are found.

Enrichment:

How has the culture of the Middle East been affected by its topography?

Topic 62: The Influence Of Geography On The Culture Of the Middle East

Aim: How has the geography of the Middle East affected its culture?

Performance Objectives: Students will be able to:

- identify the major bodies of water surrounding the Middle East
- identify the waterways within the Middle East
- use the geography of the Middle East to explain the history of the Middle Easterners as world traders
- explain the divergence of Middle Eastern culture by their traditions of trading and sailing

Materials:

- Apple IIe computer lab
- map of the Mediterranean region
- software: The Language of Maps, Series B disk 2, Focus Microcomputer Software

Motivation: Map of the Mediterranean Region

Point out the variety of cultures that surround the Mediterranean Sea: Spanish, Greek, Italian, North African, Arabic, Turkish. How are these cultures alike? How are they different? How have they influenced our culture?

Development:

1. If you wanted to go from Cairo to Athens before cars and planes existed, would it be easier to travel by boat or foot? Why?

2. Why did Middle Eastern peoples want to travel to Europe?

3. How did this travel affect their culture?

4. Advise students that the program they are about to use will provide important information about the geography of the Middle East.

5. Remind the students of the correct method for handling disks and tell them to insert disk 2 into drive "A". The program is self-loading.

5. There is no menu. Direct the students to follow the directions given by
6 the computer.

6. Allow the students a reasonable amount of time to complete the computer-directed activity. Suggested time 15-20 minutes.

Summary:

1. What body of water lies to the north of the Middle East?
2. What body of water lies to the west?
3. What are two important gulfs in the Middle East?
4. What are two important seas in the Middle East?
5. Why was navigation important to the early people of the Middle East?
6. How did navigation affect the culture of the Middle East?

Homework:

1. How has modern transportation affected our culture? foods? clothing? music?
2. Why is the Suez Canal vital to the Middle East and the rest of the world?
3. Make a list of five major countries in the Middle East.
4. List one major political or cultural feature for each country.

Enrichment:

1. How has the geography of the Middle East helped the spread of Islam, Christianity and Judaism? Explain.

2. Why do you think boats play an important role in many stories found in the Bible?

Topic 63: Ancient Middle Eastern History Through Map Study

Aim: How can we use historic maps to determine how the Middle East progressed?

Performance Objectives: Students will be able to:

- apply map reading skills to historic questions
- identify important stages of Middle Eastern development
- locate key Middle Eastern civilizations

Materials:

- Apple II computer lab
- software: Middle East by Focus Media
- student worksheet: Ancient Middle East (crossword puzzle) and Ancient Middle East - Questions
- wall-sized map showing the Middle East (or the world)

Do Now:

What do the following all have in common:

Fertile Crescent
Sumer
Kingdom of Israel
Egypt
The Crusades

Discuss possible answers to this question. The key element is that they all are related to the history of Middle East.

Motivation:

How did the Middle East get its name. Point out that the only place that three continents come together is the area that we call the Middle East. Throughout recorded history, this region has had a dramatic affect on world history. In the earliest recorded times it was the place where ancient civilizations evolved. Later it was the birthplace for three of the major religions. And now it is constantly in the news due to political turmoil.

Development:

1. We can learn about the ancient Middle East in a variety of ways. One of the most interesting is to look at maps that tell more than just where a country or city is located. Today we will be using the computer to assist us in our journey through Middle Eastern history.

2. Load the disk into the computer. Select option 1 - Ancient Times to 1914. You will be presented with 14 different historical maps of the Middle East. Using the maps and legends you will be able to answer each of the questions on the worksheet. Note: The questions are not in the same order as the maps - be careful! Distribute the worksheets.

3. Allow students enough time to go through the maps and questions. Teacher Note: The questions refer to the maps as follows:

Question	Map	Answer
1	A	Euphrates and Tigris Rivers
2	C	Red and Mediterranean Seas
3	E	Asia Minor, Persia, Egypt
4	G	Yes
5	I	Constantinople
6	K	700 A.D.
7	M	Ottoman Empire
8	N	Northwest
9	L	Jerusalem
10	J	North
11	H	Northeast
12	F	Northern Egypt, western Cyprus, and western Asia Minor
13	D	Mediterranean Sea
14	B	Southeast

4. Review the answers. If there is a question, ask the students which map they used to get their answer. ALL students can then look at the map(s) in question and jointly come up with the correct answers.

Summary:

1. Arrange each of the following groups in chronological order:
   A) Crusades, Sumer, Spread of Islam
   B) Height of Power of Ancient Egypt, Height of Power for the Ottoman Empire, Roman Conquest
   C) Alexander the Great, Mohammed, Jesus
2. In what country would Sumer be today?
3. What country or countries make up the Kingdom of Israel today?
4. Why do you think wars have been a constant part of Middle Eastern history?

Homework:

Complete the crossword puzzle.

Enrichment:

Create your own crossword puzzle or any other type of puzzle using information about the Middle East. You can collect the works of several students and make a puzzle book for others to enjoy and learn with.

Name _____ Class _____ Date _____

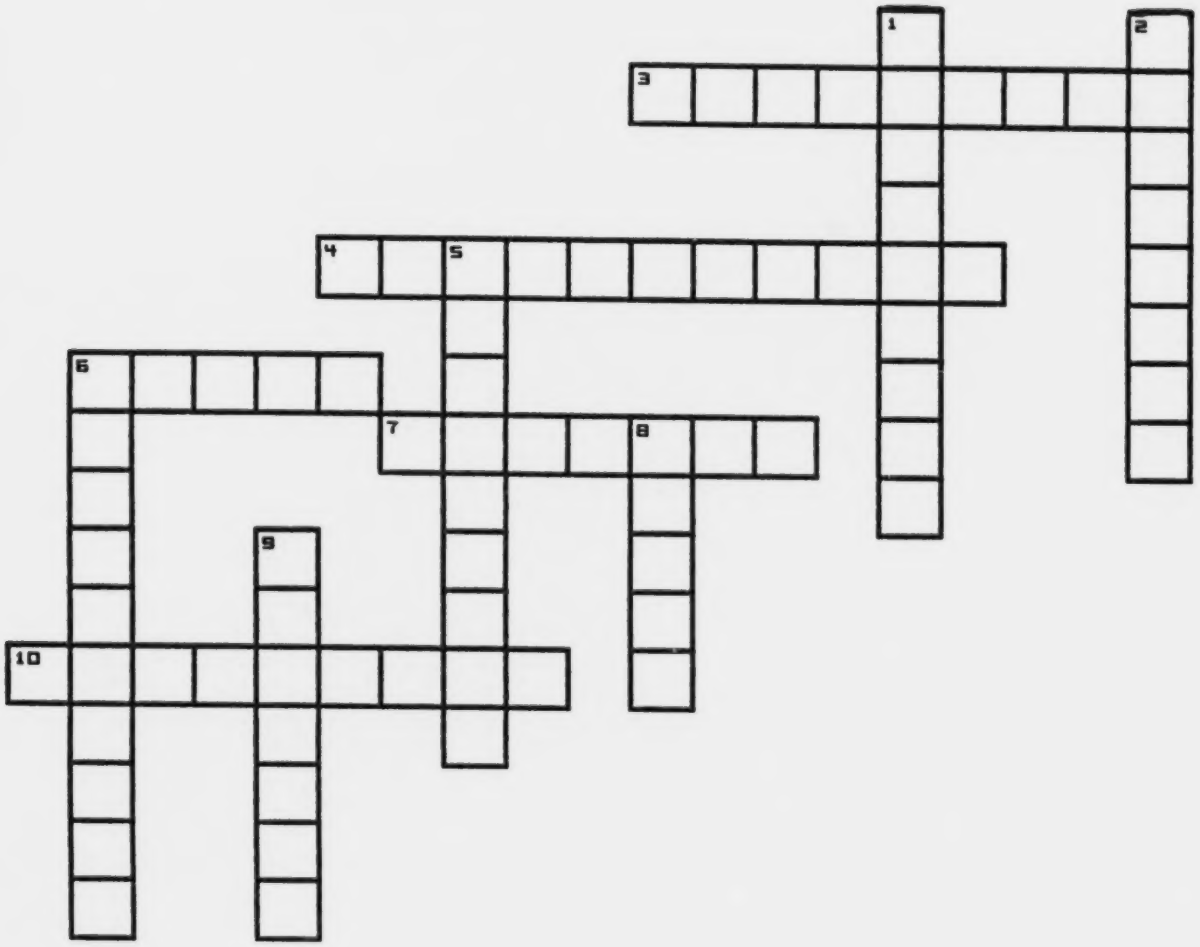
Ancient Middle East - Questions

QUESTIONS

1. What major rivers are located in the Fertile Crescent?
2. What two seas border Egypt?
3. What Middle Eastern areas did Alexander rule?
4. Did the Roman Empire encompass more than Alexander's Empire?
5. What was the major city in the Byzantine Empire of 600 A.D.?
6. Did Islam control more land in 632 A.D. or 700 A.D.?
7. During the 1600's which Empire controlled much of the Middle East?
8. Supplies going from Bagdad to Berlin would go in what direction?
9. What was the destination of the First Crusade?
10. In which direction was Mohammed going when he went on his Hegira of 622 A.D.?
11. In what direction would you travel to get from Bethlehem to Nazareth?
12. Where were the Greek settlements in the Middle East?
13. What sea is west of the Kingdom of Israel?
14. In what part of the Fertile Crescent was Sumer?

	Answer Line	Map Line
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____
11.	_____	_____
12.	_____	_____
13.	_____	_____
14.	_____	_____

Ancient Middle East



ACROSS CLUES

3. Known for his laws
4. "Land between the Rivers"
6. A famous Hebrew
7. Originated Monotheism
10. Early astronomers

DOWN CLUES

1. Not Hieroglyphics
2. Early users of iron
5. First civilized Mesopotamians
6. Belief in a single God
8. "Gift of the Nile"
9. Used coined money

Topic 64: People Of The Middle East

Aim: Who are the people of the Middle East?

Performance Objectives: Student will be able to:

- describe features of the region's demography
- recognize the impact religion has had on the Middle East
- state how climate affects population distribution

Materials:

- MS DOS computer lab
- software: One World Countries Database by Active Learning Systems
- handout - Fact Sheet
- handout - Physical map of the Middle East

Vocabulary: demography, Sunni, Shiite

Do Now:

Locate the Middle East on a map.
1. List the countries you find in that region.
2. Find the Nile River.

Motivation:

Ask students "What do these terms have in common?
Sunnis - Shiites - Copts
Persians - Berbers - Kurds
Next show a picture or pictures of people of the Middle East (preferably in traditional and modern garb). What does this tell you about the people of the Middle East?

Development:

1. Elicit student responses to the motivation. Ask students what types of information they would require to determine the characteristics of the people of the Middle East. Student responses should include: race, religion, population, languages and geography.

2. Develop board outline, such as the following:

Board Outline:

Peoples of the Middle East

300 million are mostly Arabs.
Islam - religion of most people

I. The Arabs spread their language, religion and culture throughout the region and conquered:
   a. Greeks
   b. Copts
   c. Syrians

II. Many non-Muslim minorities live in the Arab World:
   a. Copts in Egypt
   b. Syrians in Syria
   c. Maronites in Lebanon

d. Jews in Israel
e. Berbers in North Africa
f. Kurds in Iraq

III. Muslim
a. Shiites
b. Sunnis

3. Tell students they are about to study a program that contains a reference file on demographic and geographic information about countries of the world including those of the Middle East.

4. Load disk in drive "A" and turn on the computer. The main menu will now appear on the screen. Instruct students to try option 1, "Display a Country." Students should enter the name of the country they have been assigned to research, or press the Return key to enter the country's number (Africa Numbers 54-105). Press D to display the country information on the screen only. Next try option 3 on the main menu. Choose option 1 to analyze data. There are 20 categories of information which are used to sort the countries. Instruct students to choose up to three categories at any one time. To utilize other options, press N and the main menu will return.

5. The computer-directed instruction starts with an example of a country record. The students proceed to work interactively with the computer to complete a Fact Sheet and Physical Map of the Middle East (attached). The instructions for operating the software appear on the screen, allowing students to work at their own pace.

6. Allow students a reasonable amount of time to complete the activity. Suggested time is 15-20 minutes. A teacher-directed review of the students, accumulated data will permit those with incomplete files to catch up.

Summary:

1. What are the major religions of the Middle East?
2. How do most people in the Middle East earn a living?
3. The Bedouin way of life declining as more people move to cities. What do they gain by these changes? What do they lose?
4. Why do more people live along the coastal plains and river valleys than elsewhere?
5. How does climate affect where people live in the Middle East?
6. In what way does education improve the social class of city dwellers?

Homework:

See attached sheet.

Enrichment:

Have students research an ethnic or linguistic map to collect evidence showing that all Middle Eastern people are not alike. Discuss what elements of Islamic Society tended to unify this diverse population.

Fact Sheet

The country I am researching is _____.

Population:

1. Population size _____
2. Percent urban _____
3. Percent rural _____

Languages:

Religions:

Literacy Rates:

Neighbors:

Country Size:

1. Percent Forest _____
2. Percent Cultivated _____

Name_____ Date _____

Subject Class _____Teacher's Name: _____

People And Life In The Middle East

1. Define and explain the following terms:

   a. fellahin -

   b. bedouin -

   c. sheikh -

   d. madresah -

   e. patriarchal -

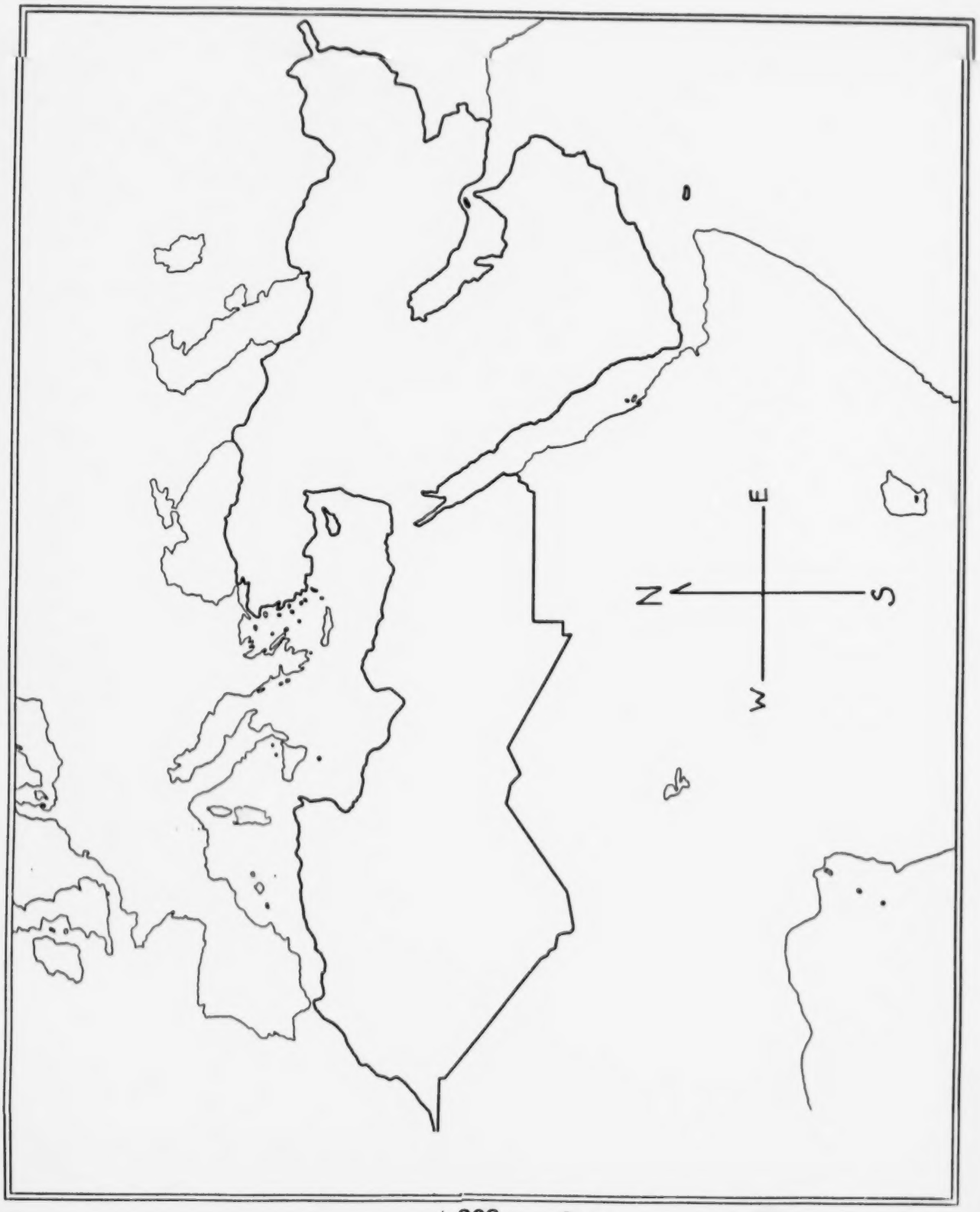
2. How do most people in the Middle East earn a living?

3. How do the Berbers differ from the Tauregs?

4. In what ways are villagers, city dwellers, and nomads interdependent?

5. If you were living in the Middle East, would you rather be living in a city or the countryside? Explain why.

Physical Map Of The Middle East



Topic 65: Middle East: Controversial Areas And Issues

Aim: How successful can you be in a game that measures your knowledge of the Middle East in dollars?

Performance Objectives: Students will be able to:

- state the beliefs of Islam
- understand the importance of Islam
- express the importance of Saudi Arabia in this region
- tell why oil is so important to the nations of the region
- relate how Egypt affects the area
- discuss how Israel has become an important nation

Vocabulary: Islam, Prophet Mohammed, Mecca, Allah, Moslems, pilgrimage, Koran, mosques, Ayatollah Khomeni, nomads, bedouins, Saudi Arabia, Iran, Kuwait, Bahrain, Qatar, Egypt, Israel, Syria, Jordan, Lebanon, monarchy, Shah, Suez Canal, arabic, democratic republic, knesset, President Anwar Sadat, Prime Minister Menachem Begin, Camp David Agreements.

Materials:

- Apple II computer lab
- software: Non-Western Cultures: Africa and The Middle East by Focus Media, Inc.
- copies of a map showing the Middle East countries and capital cities
- large chalkboard map of the Middle East region
- crossword puzzle homework sheets

Motivation:

Referring to the board map of the Middle East, recall prior readings and discussions which have focused on this region of our world.

Ask the students: "Why is the Middle East so controversial?"

Development:

1. Based on student responses, list key words on chalkboard. Explain that Islamic beliefs are very important in the Arab states. The oil boom has made these nations very wealthy. Jews, Christians and Moslems still don't trust each other. Egypt and Israel have tried to forge a peace plan among the Arab states. To this day, Israel still has to protect itself from the Arab nations of Jordan, Iran, Syria, and Lebanon. Iran and Iraq have recently stopped a war with each other which lasted many years. The Middle East is a hot bed of distrust between different religious beliefs and countries supporting those beliefs.

2. Explain to students that they are going to play a computer game based on the Middle East region. The computer game is going to test their knowledge of the area. They are to answer the questions about the topic and win "money" as they do so.

3. The computer will ask how many questions students want to answer. The maximum number of questions is 25.

The game contains a game board with three categories:
(A) Africa
(M) Middle East
(P) Pot Luck
Pressing (M) generates questions only on the Middle East.

After Pressing (M), there are three levels of wagers to make: $25, $50, or $100. Type 25, 50 or 100 and press Return to enter the wager on the question. Pressing Return again presents the question.

Every time you answer a question you must press (M) and type a wager 25, 50, or 100 for the next question.

Students are given $200 dollars to start. For every correct answer the total dollar amount increases. For every wrong answer the total dollar amount decreases. If they loose all their money, the game ends. If they make it through all the questions with some money, they are congratulated and given a check on the screen for the amount of winnings from the Middle East Trust Company. They are also told how many questions were answered correctly out of the number of questions chosen.

Every once in a while there is a bonus question. When it appears you can get all their winnings on the next question.

If students are incorrect on any question the computer states, "Sorry, that's wrong!" then asks, "Do you want some extra help?" Pressing "YES" brings a help screen which gives information that aids you in answering the question correctly when the question is seen again. The multiple-choice answers are rotated in their position every time the same question is asked in the game. There are seven help screens titled:

Screen 9: Beliefs of Islam
Screen 10: Islam's Importance
Screen 11: Saudi Arabia
Screen 12: The Oil Boom
Screen 13: Egypt
Screen 14: Israel-I
Screen 15: Israel-II

4. Review vocabulary of terms for the Middle East region. Explain that these words will be found in the above help screens.

5. Explain how to start the program. After the disk is booted, choose (A) AFRICA AND THE MIDDLE EAST. When the program asks, WHAT IS YOUR NAME?, enter it. When asked, "DO YOU NEED INSTRUCTION?" enter "YES" or "NO." At the HOW MANY QUESTIONS DO YOU WANT?(1-25) screen, enter the number for as many questions you want to answer.

Summary:

1. What are the principal teachings of Islam?
2. In what ways are men and women treated differently in the Islamic religion?
3. How has oil become important to the Middle East countries and the world?
4. How has Egypt helped in trying to make peace in the region?
5. What are some of the problems Israel has faced over the years in this area?

Homework:

1. Make a map of the Middle East showing:
   1. the countries
   2. capitals
   3. major cities
   4. industrial centers
   5. location of resources

2. How has the Suez Canal become very important in this region of the world?

3. What recent problem developed between Iran, Kuwait, and the United States in the Persian Gulf?

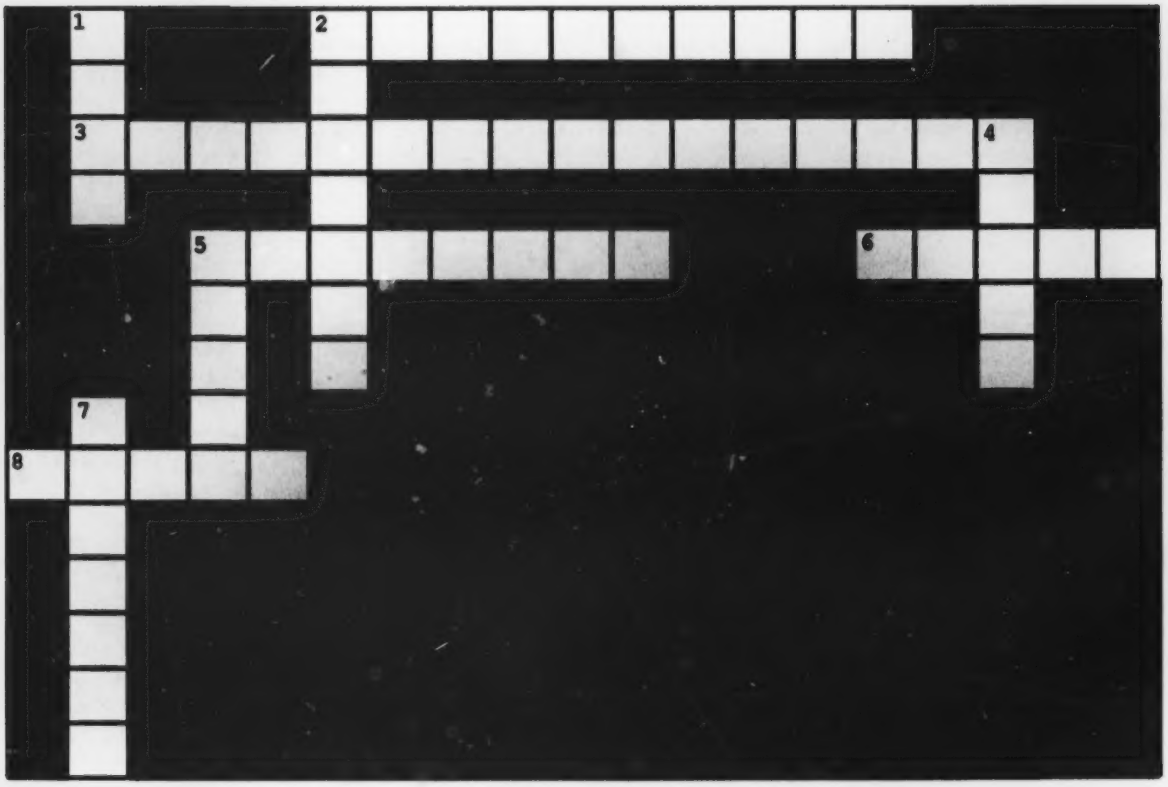
4. Why is oil so important to the world?

5. What consumer products are derived from oil?

6. Do both crossword puzzles on the Middle East.

Enrichment:

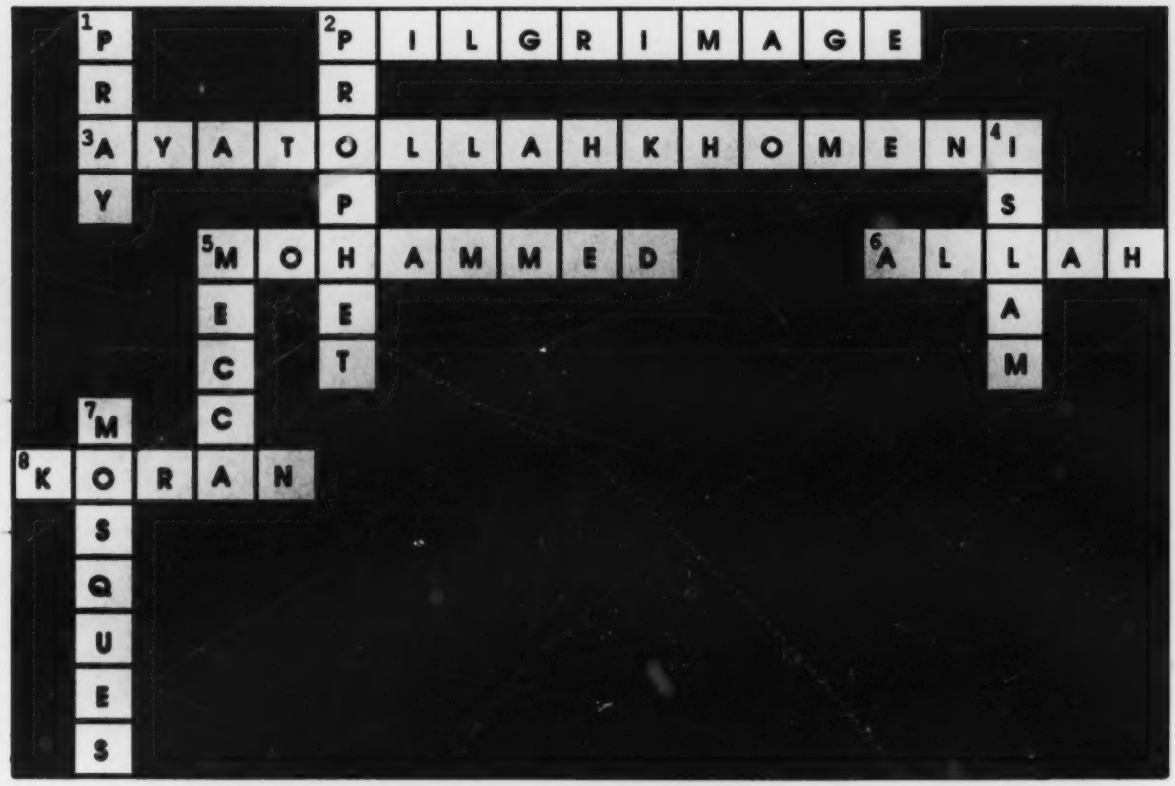
Play "Wheel of Fortune Middle East Facts Game." Students are formed into three teams. Each team chooses a captain. Teacher prepares 25 facts based on categories of names, places, countries, resources, manufactured products and beliefs of the Middle East. One box for each letter of the fact is made on the chalkboard. Only the captain of the team can choose a letter, but the other members of the team can consult with the captain and give advice. One captain picks a consonant. For each correct letter of the fact the team gets one point. The team needs two points to buy a vowel. If a team correctly guesses the fact, the team gets five points. If the fact does not contain the consonant chosen by the captain, then play moves on to the next team. Only the team that correctly guesses the fact keeps their points for that round of play. Team that first reaches twenty-one points wins.



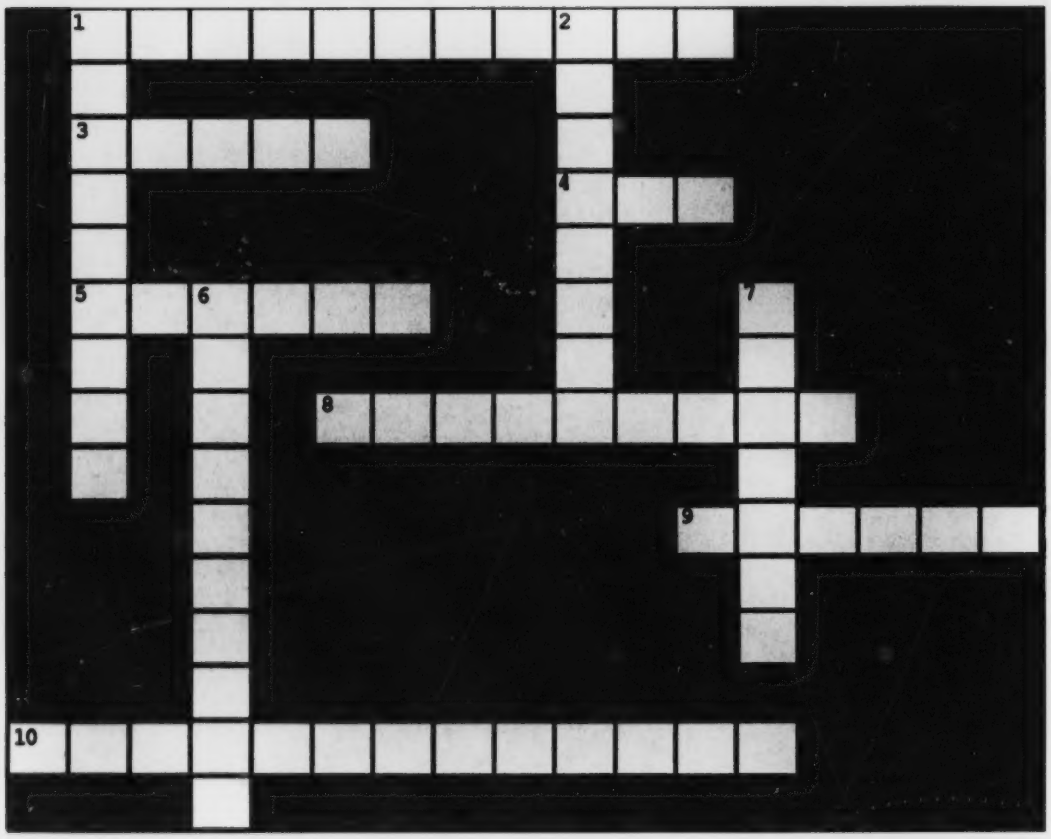
ACROSS CLUES
2. A long journey, at least once during your lifetime, to the city Mohammed lived in.
3. A former religious and political leader in Iran.
5. In 600 A.D. he founded Islam.
6. What Islam's one God is called.
8. Islam's holy book which contains many religious teachings.

DOWN CLUES
1. What each Moslem does several times a day.
2. A person who speaks with divine inspiration
4. The religion of the Moslems.
5. Famous city Mohammed lived in.
7. Moslem houses of worship.

ANSWERS : ISLAM



223



ACROSS CLUES

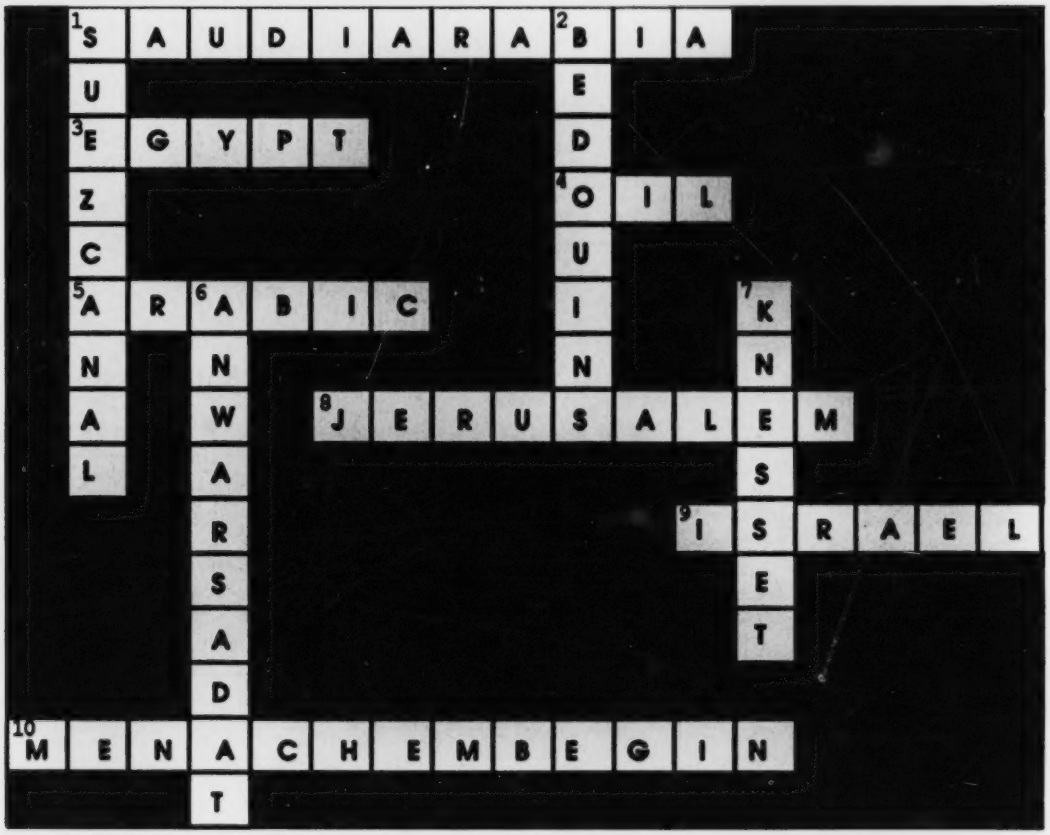
1. This country is located on the Arabian Peninsula. Its greatest wealth is its oil.
3. This country is in northeast Africa and has Cairo as its capital.
4. The most important resource in the Middle East.
5. The principal language in many Middle Eastern countries.
8. To Jews, Christians and Moslems, this city is considered holy.
9. This Middle Eastern country on the Mediterranean has Hebrew as its official language.
10. Israeli leader who signed the Camp David Agreement.

DOWN CLUES

1. This connects the Red Sea with the Mediterranean Sea.
2. They are desert nomads.
6. Egyptian leader who signed Camp David Agreement.
7. What the Israeli Parliament is called.

224

ANSWERS: MIDDLE EAST



GEOGRAPHY OF SOUTH AMERICA

Topic 66: North And South America: Geographical Data

Aim: Can you find information from a map to answer general geography questions on the continents of North America and South America?

Performance Objectives: Students will be able to:

- read a map of the continents of the Western Hemisphere
- use compass directionals to locate the names of countries on the map
- find the names of capitals and major cities of countries on the map
- locate important industrial centers, and port cities
- locate names for rivers, mountain ranges, plateaus, plains, and lowlands in countries on the map
- locate islands, seas, oceans, gulfs, straits, lakes, bays,

Vocabulary: geography, physical features, mountains, rivers, cities, capitals, country, mountain range, plateau, plains, lowland, island, sea, ocean, gulf, strait, bay, directional, northeast, southeast, southwest, northwest, atlas, border, boundary

Materials:

- Apple II computer lab (there is also an MS DOS version available)
- software: World Geography Adventure I: North and South America by Intellectual Software
- chalkboard map of western hemisphere - North and South America
- student copies of a detailed map of North and South America or student textbook detailed map of Western hemisphere
- copies of an atlas

Motivation:

Referring to the wall map of the continents of North and South America, ask:

What kind of information does this map of the Western hemisphere give us?

Development:

1. Make a list of answers given by students to the above question. When all ideas seem to be exhausted, ask individual students to explain the meanings of selected vocabulary words listed on the chalkboard.

2. Explain to the students that they will be given a program that will help them to improve their knowledge of the geography of North and South America. Hand out student copies of a map of the western hemisphere and available atlases.

3. Explain that the students will have to read a question and pick out the correct answer when given a number of multiple-choice answers. They may refer to their copies of the map to find the answers, use copies of the atlas, or look at textbook maps. Questions will be asked about each country in the Western hemisphere. Points are scored for each correct answer. The program tells the score after the last question for each country visited. Only the highest scores are entered into the Hall of Fame at the end of the program. Students are to try to get their names in the Hall of Fame. Stress that repeated playing of the game improves scores.

4. Explain that when students are not sure of an answer they can press "H" for hint. If the answer is correct after a hint, the reward is only half the value for that question. If "H" is pressed on a 58-point question, and then it is answered correctly, the program would give only 29 points. Use hints sparingly. Wrong answers receive zero points.

5. Ask a student to find the location of the Falkland Islands somewhere off the tip of South America. Point to their location on the map and say that the trip through the Western hemisphere starts here.

6. Explain that students will not have enough time to finish this program in one sitting. However, they can save the scores on the disk to pick up where they left off the next time they come to the computer lab. At the end of today's session, save the scores by pressing the "Control" key and then the "Q" ke Pressing Control and Q after any question that is being asked starts the saving scores sequence. When a player attempts to quit, DO YOU WISH TO QUIT NOW? appears on the screen. The student must type Y or N to the question. If Y is pressed the question, DO YOU WANT TO CONTINUE THIS GAME LATER? appears. If the student answers Y, then the student must place disk #1 in the disk drive when SAVE YOUR SCORES appears and press Return. The computer then prints the message SAVING SCORES and follows it with HOPE YOU HAD A NICE GAME. SEE YOU AROUND. After a continuous graphics display fills the screen, the program can be turned off.

7. Load the program. The program is self starting. Tell the students to use the same spelling of their name each time they use the program. When the program asks for their name, they type in only their last name and press Return. When the computer asks "1) Continuing a Game or 2) Starting a new game?." Choose 1 to start a old game where you left off, or 2 to begin a new game.

8. Allow three periods of time for introduction and work by students to finish the program.

Summary:

1. After looking at the atlas and map, how did you know that you were in another country?
2. How did you know how to tell which cities were capitals of countries on the map?
3. How did a map show that some larger cities were more important than other smaller cities?
4. What symbols or colons were used to show lowlands, plains, and mountains in the map?
5. How were rivers depicted on the map?
6. If you had to look for a gulf, strait, sea, or bay, for what color would you look on the map?
7. After finishing this program, what was your score?
8. What was the hardest thing to find when you used this program?
9. What was the easiest thing to find when you used this program?

Homework:

Write an essay about an imaginary hike from California to Argentina. Include the direction(s) in which you would travel, the countries through which you would pass and any significant mountains or bodies of water you would have to cross.

Enrichment:

Using large oaktag sheets of paper, have the students choose one of the following:

1. Draw the northern hemisphere and color in blue and label the location of the following:
   1.1 Oceans
   1.2 Seas
   1.3 Straits
   1.4 Large lakes
   1.5 Major rivers
   1.6 Gulfs
   1.7 Bays

2. Draw the southern hemisphere and color in blue and label the location of the following:
   2.1 Oceans.
   2.2 Seas
   2.3 Straits
   2.4 Large lakes
   2.5 Major rivers
   2.6 Gulfs
   2.7 Bays

3. Draw the northern hemisphere and using symbols, colors, and labels show the following:
   3.1 Mountain Ranges
   3.2 Plateaus
   3.3 Plains
   3.4 Lowlands
   3.5 Major rivers

4. Draw the southern hemisphere and using symbols, colors, and labels show the following:
   4.1 Mountain Ranges
   4.2 Plateaus
   4.3 Plains
   4.4 Lowlands
   4.5 Major rivers

5. Draw the northern hemisphere and using colors and labels show all the countries and capitals of each.

6. Draw the northern hemisphere and using colors and labels show all the countries and capitals of each.

Play "The Northern and Southern Hemisphere Map Game." Students are formed into five teams. Each team is given an atlas and student handout maps of the western hemisphere. Textbook maps may be used also. Teacher prepares ten questions based on the geography of the maps that are similar to the questions asked in the program. All ten questions are given to the leaders of each group. Working together, group members must locate and number the place on one map which corresponds to the numbers of the ten questions. When all questions are labeled on the map, the captain of the team tapes it up on the chalkboard. The correct numbered location in worth 5 points. Teacher checks answers. Team with the most points wins.

Topic 67: Effects Of Geography And Resources On Argentina's Economy

Aim: How do the geography and natural resources of Argentina affect the economy of the country?

Performance Objectives: Students will be able to:

- identify the geography and resources of Argentina
- explain the relationship of geography and resources to an economy
- use a data base program to search for information

Materials:

- Apple or Ms DOS computers
- software: One World Countries Database by Active Learning Systems
- dot matrix printer
- notebook or folder for notes

Motivation:

Ask the students if they ever wondered why the United States had such a powerful economy that could produce most of the goods we needed and still have enough left over for export. Elicit from the class the fact that our nation depends on natural resources and its geographic location to bolster its economy. Discuss the variety of climate and geographical resources of the U.S.

Development:

1. Tell the class that Argentina is a country in South America and that its economy has certain similarities to our own. Elicit from the class what they may be. Locate the country on a map.

2. Introduce the class to the data base program. Explain that the program can be used to investigate the countries of the world in many categories. After loading the program, select the Display a Country option. Enter Argentina as the choice.

3. Have the students peruse the data base program for 10-15 minutes with instructions to find the Imports/Exports listings. When it is located, they are to list those items which are among the most important for the country.

4. Using the Analysis option of the program have the students determine how many other Latin American countries import or export the same products. Ask: What other countries in the world import/export the products?

5. Students are then to print out the data from the program to the computer printer.

Summary:

1. What are the natural resources of Argentina?
2. Where is Argentina located? What is its relationship to the equator?
3. What type of economy does Argentina have? Using current events items, describe its political climate.

Homework:

Trace the map of Argentina and color in all the natural resources the data base program listed for the country. Display the map on the classroom bulletin board. Which of Argentina's exports are similar to the exports of the U.S.A.?

Enrichment:

Research how Argentina's economy compares with that of another Latin American country (e.g. Brazil). What similarities and differences are there? Using a globe contrast the seasons and climates of the two countries.

APPENDICES

Software Duplication Guidelines

Like plays, novels, songs, textbooks, and all other published material, the programs and files on a published computer diskette are fully protected by the copyright laws of the United States. No diskette can legally be copied without the appropriate permission of the publisher. The position of the Division of Computer Information Services of the New York City Board of Education on diskette copying is the following:

1. Duplication of copyrighted software or documentation is prohibited.
2. Software publishers must be contacted to verify procedure for back-up multiple copies and licensing agreements.
3. A publisher's written permission is required to download or network programs to other microcomputers.
4. No student or Board of Education employee may use school computers to duplicate copyrighted software.
5. The use of illegally duplicated software, however obtained, is prohibited in all Board of Education facilities.
6. Simultaneous use of original software and/or its back-up is not permitted without the written permission of the publisher.

The copyright of the enclosed diskettes, however, belongs exclusively to the New York City Board of Education. Any New York City public school employee may make an unlimited number of copies of these diskettes for use in the New York City public schools, either in day or evening sessions, without obtaining further permission. For your convenience, and to enhance the educational value of these programs, it is strongly advised that you make at least one copy of each diskette for each computer in your computer lab to allow all of your students to work on the same program simultaneously.

The New York City Board of Education has computer diskettes under contract at this time. If you wish to purchase additional diskettes, they are available under the Board of Education contract # P-3086, item # 11-99-6000.00.3 from:

Athana Incorporated
Suite 106
2730 Monterey Street
Torrance, California 90503
1-800-421-1591
Att: Carol Romeo

Copying Public Domain Diskettes For MS DOS Computers

Diskcopy with One Disk Drive

To make a copy of a software diskette on an IBM PC, PCjr, or IBM compatible computer with a single disk drive, follow these steps:

1. Before you start, be sure that the diskette you wish to copy is write-protected. Write protecting a diskette will prevent you from accidentally erasing or overwriting any of its programs or files. You can write-protect a diskette by placing a small piece of tape over the write-protect notch on its left side.

2. Insert the IBM DOS diskette into the disk drive, turn the computer and the monitor on, wait for the DOS to boot up, then enter the date and time. The last line on the screen will be A>.

3. Type Diskcopy, then press ENTER. The screen will display the message,

   ```
   Insert SOURCE Diskette in Drive A :
   Press any key when ready . . .
   ```

   The SOURCE diskette is the diskette you want to copy. Remove the DOS diskette from the disk drive and insert the Source diskette. Press ENTER.

4. The screen will display a Copying . . . message, then the following instructions:

   ```
   Insert TARGET Diskette in Drive A :
   Press any key when ready . . .
   ```

   The TARGET diskette is the diskette you want to copy to. Remove the source diskette from the disk drive and insert the Target diskette.

   (NOTE: It is not necessary to format a new diskette before using it as the target diskette. Diskcopy will format automatically before copying.)

   Press ENTER.

5. If your target diskette has not been formatted before, the screen will display a Formatting . . . message before it copies. After it has formatted and copied, it will repeat the message it gave you in step 4:

   ```
   Insert SOURCE Diskette in Drive A :
   Press any key when ready . . .
   ```

   Remove the target diskette from the disk drive and insert the source diskette again. Press ENTER.

6. After another Copying . . . message, the screen will repeat the message from step 5:

   ```
   Insert TARGET Diskette in Drive A :
   Press any key when ready . . .
   ```

Again, remove the source diskette from the disk drive and insert the target diskette. Press ENTER.

7. This is the last stage of the procedure. When the screen displays the message

```
Copy another diskette (Y/N)?
```

the procedure is over; the target diskette has been made into a duplicate of the source diskette.

8. If you want to make another copy of the source diskette, type in Y. The screen will repeat the message

```
Insert SOURCE Diskette in Drive A :
Press any key when ready . . .
```

You can repeat this procedure as many times as necessary and make as many copies of your original diskettes as you need for use in the New York City public schools. When you no longer wish to make additional copies, press N and remove the source diskette from drive A.

Diskcopy with Two Disk Drives

Copying on an IBM PC or IBM-compatible computer with two disk drives is an even easier procedure, because it doesn't require alternately removing and inserting the source and target diskettes. Follow the directions for steps 1 and 2 for a computer with one disk drive, then type in Diskcopy A: B: at step 3 and press ENTER. The screen will display this message:

```
Insert SOURCE Diskette in Drive A :
Insert TARGET Diskette in Drive B :
Press any key when ready . . .
```

Remove the DOS diskette, insert the source and target diskettes into the proper disk drives and press any key on the typewriter keyboard. The screen will display a Copying . . . message while it copies the source diskette and a formatting . . . message if the target diskette hasn't already been formatted. When the screen displays the message

```
Copy another diskette (Y/N)?
```

the procedure is over; the target diskette has been made into a duplicate of the source diskette. If you want to make another copy of the source diskette, type in Y and repeat the procedure.

Copying Public Domain Diskettes For The Apple IIe And II Plus

To make a copy of your software diskette, follow these steps:

1. Before proceeding, be sure that the diskette you wish to copy is write protected. Write protecting your diskette will prevent you from accidentally erasing or overwriting any of its programs or files during this or any other use of the diskette. You can write protect a diskette by placing a small piece of tape over the write protect notch on the diskette's left side.

2. Insert the DOS 3.3 System Master diskette into drive 1 and turn the computer and the monitor on. When the Applesoft prompt and cursor appear appear type in RUNCOPYA and press RETURN.

3. The screen will display the message

```
APPLE DISKETTE DUPLICATION PROGRAM
ORIGINAL SLOT:   DEFAULT = 6
```

   Press RETURN.

4. The screen will display

```
ORIGINAL SLOT: 6
        DRIVE:    DEFAULT = 1
```

   Again, press RETURN.

5. The screen will display

```
DRIVE: 1
```

   and add a new message:

```
DUPLICATE SLOT:  DEFAULT = 6
```

   Press RETURN.

6. The screen will display

```
DUPLICATE SLOT: 6
```

   and ask one last question:

```
DRIVE:    DEFAULT = 2
```

   If you are using an Apple II Plus or IIe with one disk drive, change the number 2 to 1 and press RETURN. If your machine has two disk drives, simply press RETURN. The screen will display

```
-- Press 'RETURN' key to Begin Copy --
```

7A. If you are using a computer with two disk drives, the screen will give you no further instructions. Remove the DOS 3.3 System Master diskette and insert the source diskette into drive 1. (The source diskette is the diskette you want to copy.) Insert the target diskette into drive 2.

(NOTE: It is not necessary to format a new diskette before using it as the target diskette. The Apple II Plus or IIe will format it automatically before copying onto it.)

Press RETURN. Reading and Writing messages will appear alternately as the computer reads the source diskette and writes onto the target diskette. If the target diskette has not been formatted before, the screen will also display Formatting.

7B. If you are using a computer with a single disk drive, press the RETURN key. You will have to alternately insert and remove both the source diskette and the target diskette during the copying procedure. The screen will tell you what to do at the proper times. Follow its instructions carefully. When you insert the target diskette for the first time, the screen will display the word Initializing while it proceeds.

When the screen displays the message

DO YOU WISH TO MAKE ANOTHER COPY?

the procedure is over; the target diskette has been made into a duplicate of the source diskette.

8. If you want to make another copy of the source diskette, type in Y and press RETURN. The screen will repeat the message

-- Press 'RETURN' key to Begin Copy --

You can repeat this procedure as many times as necessary and make as many copies of your original diskettes as you need for use in the New York City Public Schools. When you no longer wish to make additional copies, press N and remove the source diskette from drive A.

Caring For Your Diskettes

Your computer diskettes will provide years of dependable service if you and your students handle them properly by following a few simple procedures.

1. Never handle a diskette unnecessarily. When it is necessary to touch a diskette, hold it by the corner near the label, and touch as little of its surface as possible. Under no circumstances should you ever touch the interior magnetic recording surface, either through the center of the diskette or any other opening in the diskette cover.

2. Never bend or fold a diskette.

3. Whenever possible, write out the diskette label before affixing it to the diskette. If it is necessary to write on the label after it has been affixed to the diskette, always use a felt tipped pen or marker. Never write on the diskette with a pencil or ball point pen.

4. Never attach anything to a diskette with a paper clip of any kind.

5. When a diskette is not in use, always return it to its paper envelope. store it in a cool, safe place, away from direct sunlight, excessive heat, moisture, dust, and dirt of any kind.

6. Computer diskettes are magnetic, and any contact with other sources of magnetism can destroy the programs and files that are stored on them. Keep your diskettes away from magnets of any kind, no matter how harmless they seem to be. Magnetic desktop paper clip holders (a principal source of trouble because they aren't obvious), magnetic children's toys and so forth can damage your diskettes.

   In addition, many common electric and electronic appliances are sources of magnetism. Televisions, radios, electric lights, and even the screen of your computer monitor produce minute amounts of magnetism which can cause diskette damage. Store your diskettes away from these devices when they are not in use, and do not allow your diskettes to come into contact with them when you are using them.

7. Never attempt to clean a diskette with cloth or fluid.

8. Always write protect your important diskettes by covering the notch in the left side with tape. This will keep you from accidentally erasing or overwriting an existing program or file.

9. Finally, accidents that ruin or erase diskettes are bound to happen. Learn how to use the diskcopy and copy commands on your DOS, and, as a precaution, always make back-up copies of any diskettes you would find difficult or impossible to replace.

For More Help .....

The Division of Computer Information Services maintains a Technical Assistance Center (TAC) in each of the five boroughs. These centers are equipped with a wide variety of computers, software, and, most important, experienced advisors to help you use the computers in your school more effectively and to answer any questions about computer education you may have. All New York City public school teachers are welcome to make use of TAC facilities, either by telephone or in person, at any time during the year. TACs are normally open from 9 A.M. to 5 P.M. during the school year and through all school vacations, including the summer, but daily hours can vary. Call first.

Brooklyn TAC
3000 Avenue X
Brooklyn, N.Y. 11235
(718) 769-2860

Brooklyn TAC East
P.S. 166
800 Van Siclen Ave.
Brooklyn, N.Y. 11207
(718) 257-7741, 257-7556

Manhattan TAC North
134 West 122 Street
New York, N.Y. 10027
(212) 662-0122

Manhattan TAC South
122 Amsterdam Ave. - Rm. 374
New York, N.Y. 10023
(212) 769-2710

Queens TAC
167-01 Gothic Drive
Jamaica, N.Y. 11432
(718) 658-0491

Staten Island TAC
1200 Manor Road
Staten Island, N.Y. 10314
(718) 494-5042

Bronx TAC
1000 Teller Avenue
Bronx, N.Y. 10456
(212) 588-0279

Software Used In This Guide

Africa	Educational Activities	Apple	89-5257.01.7
Appleworks	Claris	Apple	61-8160.03.5
China: Three Thousand Years	Focus Media	Apple	15-5140.33.7
Concepts Computerized Atlas	Concepts	MS DOS	09-1814.70.7
Data Pursuits: Countries of the World	Grolier	Apple	60-2910.17.X
A First Program About Globes	January	Apple	87-3860.36.5
Geography Keyword	Focus Media	Apple	55-5140.70.9
History of Asia and Africa	Focus Media	Apple	55-5140.36.9
Language of Maps - Series A	Focus Media	Apple	55-5140.57.1
Language of Maps - Series B	Focus Media	Apple	55-5140.58.X
Maps and Globes: Understanding Maps and Globes	Troll	Apple	81-6712.35.2
Map Skills	NYC Bd. of Ed.	Apple	88-3158.03.5
		MS DOS	88-3158.02.7
Master Mapper Series	Imperial	Apple	84-8103.67.X
Matchmaker: World Geography Facts	American Educational	Apple	71-2910.03.4
Middle East	Focus Media	Apple	55-5140.34.2
Non-Western Culture	Focus Media	Apple	01-0530.03.7
Ocean Floor	Prentice Hall	Apple	13-7045.29.8
		MS DOS	13-7045.52.2
One World Countries Database	Active Learning	Apple	95-9000.11.9
Scholastic PFS: Curriculum Databases: World Geography	Scholastic	Apple	59-0983.36.9
Small Town U.S.A.	Island	Apple	60-1910.02.8
The Spy's Adventure in Europe	Polarware	Apple	94-4247.06.7
Stickybear Town Builder	Weekly Reader	Apple	91-1787.46.1
Ticket to London	Blue Lion	Apple	94-5552.17.3
		MS DOS	94-5552.16.5
Ticket to Paris	Blue Lion	Apple	94-5552.03.3
		MS DOS	94-5552.04.1
Voyage of the Mimi: Maps and Navigation	Holt, Rinehart & Winston	Apple	60-1910.58.3
Weather Forecasting	Prentice-Hall	Apple	13-7046.44.8
World Geography Adventure I: North and South America	Intellectual	Apple	60-2910.12.9
		MS DOS	87-2006.08.5
World Geography Adventure II: Europe	Intellectual	Apple	60-2910.10.2
		MS DOS	87-2006.11.5
World Geography Adventure III: Africa	Intellectual	Apple	87-4920.54.X
		MS DOS	87-4920.55.8
World Geography Adventure IV: Asia	Intellectual	Apple	87-4920.49.3
World Geography Series: Eastern U.S.	Mindscape	Apple	87-0856.33.2
World History on Computer	Focus Media	Apple	55-5140.36.9

The above listing does not include all approved software which might be included in conjunction with this book, although the suggested software is appropriate to the topics presented. Neither is it our intention to recommend one piece of software over another. Teachers are encouraged to preview all available software packages and select those with which they are most comfortable.